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Transmitted herewith for filing under 35 U.S.C. 111 and 37 C.F.R. 1.53 is the patent application of:

Piotrowski et al.

For: **SYSTEM AND METHOD FOR THE STORAGE AND ACCESS OF ELECTRONIC DATA IN A WEB-BASED COMPUTER SYSTEM**

Enclosed are:

- ☒ Certificate of Mailing with Express Mail Mailing Label No. **EL 702 182 849 US**
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Dated: **October 31, 2000**

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Invention:

SYSTEM AND METHOD FOR THE STORAGE AND ACCESS OF ELECTRONIC DATA IN A WEB-BASED COMPUTER SYSTEM

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SYSTEM AND METHOD FOR THE STORAGE AND ACCESS OF ELECTRONIC DATA IN A WEB-BASED COMPUTER SYSTEM

RELATED APPLICATIONS

This patent application relates to U.S. provisional patent application serial number 60/162,643 filed on November 1, 1999.

FIELD OF THE INVENTION

Described herein is a system and method organizing and storing electronic data such that it is accessible over a data network, and more particularly to storing and organizing the electronic data such that it and all related information stored in a database system are more easily accessible.

BACKGROUND OF THE INVENTION

As is well known, organizations such as corporations employ many internal processes and procedures for carrying out their business. For example, companies may set procedures for far ranging functions such as purchasing supplies, providing training, as well as the management of their business programs. In the situation where an organization is small and has a small number of employees, the use of processes and procedures may be less important. This is because parties involved are usually aware of what others are doing in the organization and the focus of the particular organization is quite narrow.

As an organization grows, and more and more people are employed and performing different tasks, it becomes more important that common processes and procedures be implemented. The reason for having common processes and procedures are many, but they

mostly revolve around ensuring efficiency of the business and the avoidance of duplication of effort.

As such, it is commonplace for an organization to generate sets of policies and procedures which are to be used by most or all of the employees within a particular organization. Depending on the size of the organization, the institution of processes and procedures may be performed in a manner such that a set of governing procedures may be created for the entire organization while individual groups may generate their own processes which are more applicable to tasks and other functions which are unique to them.

One difficulty which may be encountered in establishing a governing set of policies and procedures is providing organization wide access to this information. Also, even if access is provided to these items it may still be difficult to assure that all members in the organization have access to deletions, additions, and updates of the processes and procedures.

One manner in which some organizations have provided organization wide access to their processes and procedures is to distribute these items in paper form to all employees which would be using said processes and procedures in their work. Periodically, additions, deletions, or updates may be issued in paper form which the employee would then use to manually update their copy. One drawback of this system is that the use of the most updated procedures by the employees is dependent on the individual employees updating their processes and procedures manuals in a timely fashion.

SUMMARY OF THE INVENTION

The inventors have recognized that providing a centralized location for the organization and accessing of policies and procedures may be advantageous in that these policies and

procedures are easily updated and organized in a manner such that they have applicability to a large number of functions within the organization. In particular, in providing a centralized web-based computer tool, the policies and procedures can be organized in such a fashion that they may be searched in a number of different modes, and all related information may be easily accessed.

Described herein is a system and method for organizing assets and other related electronic information in a web-based computer system. According to the system and method described herein, at least one searchable database may be provided for storing assets and/or associated information where each record in the at least one database may have associated therewith at least one classification identifier which is searchable and may identify a particular asset and/or associated piece of information. Each asset or other associated information may also have links associated therewith to other records in the database such that when a search of the database is performed to identify assets and/or associated information, any relevant records in the database are also identified.

The system may further comprise a communications interface configurable for establishing lines of communication between system users and the system described herein over a data network. Some examples of the data networks which are employable to access the system described herein include the Internet, a local area network (LAN), and an intranet. In one configuration of the system described herein, when access is gained through the communications interface, a number of interactive screen displays may be presented such that a system user may navigate within the system and perform various search functions with regards to locating assets and/or other associated information.

In order to perform the searching function described above, the system may further include a search engine specially configured to search the records in the at least one database to locate records which include selected classification identifiers. Once the desired records are located, the search engine described herein is further configured to compile the search results into a predetermined format which is presentable to users which are connecting over the data network. One example of this compilation process includes compiling the results into HTML pages which are viewable by a system user through use of a standard web browser.

The system described herein may be configured to present a number of interactive screen displays which a system user may employ to navigate through the system and to initiate various search functions. Upon initial access to the system, the home page may be presented to the system user and through navigation buttons (hypertext links) included in the display, move to other specially configured screen displays. Once these other displays are accessed, information about specific assets and/or asset related information may be presented, and the system user may then initiate the various search and retrieve functions for records in the database.

In one configuration of the invention, the assets and associated information may relate to processes and procedures that an organization employs in carrying out various aspects of its business. Each asset which is stored in the database may be in the form of an electronic document which is viewable in word processing or imaging software. Asset information may include one or more classification identifiers which assist in locating particular assets or other items of asset information.

The processes and procedures and associated information may be classified such that some have applicability over the entire organization, and some have a lesser applicability, such as for only a business unit, or a particular work group. Further, certain assets may be classified

as falling with a particular process area. In one example, processes and procedures may be classified within tiers. As such, the higher tier classification may mean that processes and procedures apply to the whole of an organization, and as the tiers get lower the application of the asset becomes more focused. When a particular process is generated and configured such that it is stored in the system described herein, a particular tier designation may be added to its classification identifier such that it is searchable in this manner.

As mentioned above, other classification identifiers which may be associated with assets, which include such things as the process area with which the process asset has application. Other examples of a classification identifier may be the organization within which the assets were created, identification number, and creation date.

In order to provide for a more controlled use of certain assets, particular assets may be given special designations. For example, assets may be identified within the system as being either certified, sample and/or draft. A sample asset may relate to a certain number of processes and procedures which are put out to other groups within an organization as a sample of a particular way to perform tasks. Certified assets may relate to particular processes or procedures which have applicability across the organization which the organization has designated as a standard for performing a particular task. With regards to draft assets, before an asset may be implemented as policy, it may need to go through various review stages and through the system described herein, it may be made accessible at its various stages of development to various parties.

One additional way in which the assets and associated documentation described herein may be accessible is through inclusion of links for the various assets and related information as part of a process maturity road map for performing a particular task. Included in the system

described herein may be a number of interactive screen displays which assist a system user in carrying out a long term task such as running a project or a program. As the various interactive screen displays provide direction as to how to carry out the tasks, links to various assets may be included such that they are easily accessible.

The information associated with the assets, which is also stored in the database, may include such items as change directives and change requests specifically related to one or more processes. As a particular procedure or process is employed in an organization, its use may evolve over time. A mechanism may be needed to implement changes in the particular processes or procedures. As such, change requests may be created and monitored as part of the system described herein. Change directives which spring from change requests may also be included. Through identification information included with a change request, a system user may be able to monitor its approval and implementation in a process asset.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 discloses a system diagram for the web based electronic data system described herein.

Fig. 2 discloses a diagram which shows an example structure for the asset information database.

Figs. 3a and b disclose a database diagram which shows the classification identifiers associated with particular records as well as links established between the different records.

Fig. 4 discloses a home page interactive screen display which is employable to navigate to various functions of the system described herein.

Figs. 5a and 5b disclose a diagram which display the links between the various interactive screen displays.

Fig. 6 discloses a screen display employable to view assets when they are categorized by Tier.

Fig. 7 discloses a screen display which includes a listing of process assets located in search within a selected tier.

Fig. 8 discloses a screen display which provides information as to a selected process asset.

Fig. 9 discloses a graphical screen display employable for accessing assets within a particular process area.

Fig. 10 discloses a listing of process assets within a particular process area.

Fig. 11 discloses a screen display employable for viewing assets within process areas which have been certified.

Fig. 12 discloses a screen display employable to select assets which are in the draft stage.

Fig. 13 discloses a screen display which is employable to identify sample assets.

Fig. 14 discloses a screen display employable to review a road map for performing a task and selecting assets which may be employed as part of that process.

Fig. 15 discloses a screen display employable to view various information with regards to change requests, access recent changes to assets or submitted change requests.

DETAILED DESCRIPTION

Disclosed in Fig. 1 is a system diagram for the electronic data storage and access system described herein. In the configuration shown in Fig. 1, the system 10 is web-based in that it is

accessible via a number of different types of data networks 8 which include, but are not limited to, the Internet, an organization's intranet or a local area network (LAN). The system 10 described herein may be implemented on one or more network servers, using any number of platforms such as Unix or NT. In another configuration of the invention, which is described in greater detail below, the present system may be implemented simply on a personal computer.

For illustration purposes the system 10 is shown to include two servers, the web server 11 and the cold fusion server 18. One skilled in the art would realize that the functions performed by the two servers may be performed on the same physical hardware. Included in each of the servers are a number of processing components which are specially configured to perform tasks with regards to communicating with system users over the data network, searching and extracting information from the various databases, and/or formatting the extracted information for viewing..

Included in the web server 11 is a communications interface 14 which provides for establishing a data connection between the system 10 and a system user 6 over the data network 8. The interface 20 may be configured such that a system user may navigate within the system 10 using a commercial web browser. Further included web server 11 is search engine 20 which is configured to initiate search requests entered by system users which in turn are provided to the cold fusion server 22 for further processing. Finally, the web server 11 may include a security module 24 which is employable for limiting access to selected information in the databases. The operation of the various components of the web server 11 will be described in greater detail below.

In communication with the web server 11 is the Cold Fusion server 22. In one configuration of the system described herein, Cold Fusion software from Allaire may be

employed to receive search requests from the web server 11, perform the searches of the associated database, extract the information, compile in a desired format, and provide it to the web server 11 for presentation. Although Cold Fusion is described herein for use with system, one skilled in the art would realize that other types of software such as Active Server Pages by Microsoft may be configured and employed. Incorporated into the cold fusion server 18 is HTML page generator 22 which is employable to convert data extracted from one or more databases into interactive an HTML pages (some of which may include hypertext links) which in turn are provided to the web server 11.

In connection with the Cold Fusion server 18 are an asset information database 26 and an asset database 28. Stored in these databases are searchable entries for assets and asset information. More specifically, the asset database 28 may be configured to contain various documents which comprise the assets. The asset information database 26 may contain various types of descriptive information relating to the assets stored in database 28. Although both databases are shown as resident in the system 10, in other configurations of the invention, the databases, or information contained in the databases, may be distributed in remote locations and accessible over the data network. The configuration and content of these databases will be described in greater detail below.

If the system described herein is to be configured on a personal computer, the hard drive may be configured to include one or more relational databases which include the assets and asset information. Further, the personal computer may be configured such that a number of the screens which are to be presented to a system user are stored in the database as flat files which are presentable upon selection of particular items by a system user.

Returning again to system 10 as is disclosed in Fig. 1, the databases described herein may comprise any number of different types of relational databases. Examples of these types of databases may include Oracle, Microsoft Access, . . . etc. Alternatively, the databases described herein may be configured to store assets and asset information in flat files which in turn are accessible and presentable to system users.

Generally, the system described herein is an asset library which is an online centralized repository for various process and procedures as well as related information. The assets themselves may be electronic documents created in a word processing (such as Microsoft Word, WordPerfect, ...) and/or image (Adobe Acrobat,...) software. Associated information may also be stored in the system which provide assistance in either accessing or determining the status of the asset. Because the system is web-based, it allows for easy access (it may be accessed using a standard web browser). The kinds of information which may be accessed and viewed through the system described herein may include electronic documents, templates, charts, schedules and other readable files.

Before the operation of the system is further discussed, a more specific description is provided as to the types of data which are accessible in the system described herein. Disclosed in Fig. 2 is diagram which provides a framework for the types of information which are included in the asset information database 26. This diagram is merely for illustrative purposes because the database may be configured such that different types of information may be stored in one or more different tables. In asset information database 26 it can be seen that separate tables are provided for electronic documents 100, assets 102, change directives 104, change requests 106, and process areas 108. In short, the electronic documents table 100 provides information for accessing the assets in document form, The assets table 102 includes descriptive and identifying

information for assets. Change requests table 106 includes information relating to proposed changes to assets. Change directives table 104 includes information generated in response to change requests, and provide specific information as to changes to be made to one or more assets. Process areas table 108 includes information for the various process areas (such as engineering, business or support operations) to which each of the assets is assigned.

Disclosed in Figs. 3a and b is a database diagram for database 26 which shows in particular the associations which may exist between the various records in the different tables included in database 26. The association shown therein provide for the simplified searching of assets because it removes the necessity of storing a particular piece of information in more than one database. Further by creating records which include associations with one or more other records, the flexibility is provided such that a particular piece of asset information or an asset may be identified through employing a number of different search methods.

Also shown in Figs. 3a and b are examples of the descriptive information (classification identifiers) which are associated with each type of record. As part of a relational database, each of the records in the various tables is searchable by employing the search engine 20 incorporated in web server 11 to search for one or more classification identifiers. Identified records may then be retrieved, converted to a desired format, and presented to system users. Some of the classification information associated with each record may either be displayed or not displayed. For example, with regards to the descriptive information included with a record in the process asset table 120, the records may comprise identifiers such as a tier number, serial number, status type, etc.

Referring again to the diagram of Figs. 3a and b, in order to better understand the associations between the various types of records, relationship lines with descriptive information

have been provided. Specifically, the data structure described herein is hierarchal in nature and the relation lines provide an indication of which records, either alone or with others, are apart of another record. In reviewing the diagram it is seen that one or more of the process assets 120 may be an implementation of an instruction in a corporate policy category 124. In turn, one or more of the process assets 120 may be within in process area 122. It can be seen that a process asset may also impact upon a process area 122, while a process area 122 may be responsible for a process asset 120.

In Figs. 3a and b, it is further seen that one or more of the change requests 124 are primarily about a particular process asset 120. In actuality, change requests may be forms or other documentation submitted by system users which have the effect of modifying or otherwise changing a particular process asset. Before this change is implemented in a particular process asset, the change request may be accessed and viewed as a piece of information associated with a particular process asset. Continuing, one or more change directives 126 may include details which are explained by a change request 124, and one or more change directives may affect a process asset. Finally with regards to the change directives 126 and change request 124, one or more of both may be directed to a process area 122.

Referring back to process asset 120, it is seen that it may be composed of one or more process asset documents 136. The descriptive information included in the process asset document 136 provide for locating the actual asset (electronic document) in database 28. In order to provide some flexibility in viewing the asset document, the process asset document 116 may be created in one or more document or image formats 134. As described above, a document format is in some kind of word processing or imaging software.

Further shown in the diagram of Figs. 3a and b is the relationship between process asset 120 and any assets 140 which it replaces. As time goes on, certain process assets lose their applicability to a particular organization and must be replaced. As such, certain assets may be introduced to replace them. In order to provide continuity, it may be desirable to retain the replaced assets 140 in a database such that they may be referenced if necessary. Each of the replaced assets is in turn associated with a particular category 142. Also, one or more implementation elaborators 141 may provide for implementation and elaboration of a process asset 120.

Still continuing in the review of Figs. 3a and b, it is seen that records are included for sample assets 130 and one or more of the sample assets is owned by a sharing organization 128. Sample assets are those assets which have been provided by a particular segment of an organization for optional use across the organization. Sample assets may further include certified assets which have been certified by a particular organization as being compliant with an approved set of standards and practices. It is seen that the sample assets 130 also are composed of one or more sample documents 132. As with the process asset document 136, this record includes identifying information for locating one or more documents in asset database 28. As was mentioned above, these electronic documents are available for viewing in a number of formats.

As was mentioned above, the system 10 described herein is accessible over a data network, such as the Internet, through use of a personal computer equipped with a web-browser. Upon gaining access to the system, various interactive screen displays may be accessed such that the system user may navigate within the system. Disclosed in Fig. 4 is a "home" interactive screen display 30 which may be presentable to a system user when access is initially gained to

the system described herein. This screen display may provide the portal for the system user to gain access to any number of "areas" within the system where desired information may be accessed. Navigation to these "other" areas may be gained through the selection of the various navigation buttons, such as hypertext links, included in the screen displays.

As can be seen in display 30, navigation buttons are provided for access to the business process management system 34, the process improvements 46, the sample assets 48, the draft assets 50, as well as the road map 44. Also included in this home page may be a side bar 32 which includes a number of selectable navigation buttons for accessing additional areas. These include the best practices area 33, change requests 40 and replaced assets 42.

To better understand the process of navigating through the system described herein, disclosed in Figs. 5a and b is a diagram which discloses the various interconnections between the interactive screen displays presentable by the system described herein. As was seen in Fig. 4, a number of hypertext links are included on the home page which provide for accessing various other pages within the system. Most of the selectable links provide for accessing other displays, where the other displays mostly provide for performing various search of the database to locate assets and associated information. The diagram in Figs. 5a and b show the trail of links which may be followed when accessing different areas of the system described herein.

Returning again to Fig. 5a, a link is provided on the homepage for viewing business system page 64. With access to this page, various additional choices may be provided with regards to the viewing of assets stored within the database. As can be seen, links 76 and 78 provide for searching assets by functional area 76 or listed by tier 78. Through links 76 and 78, links 80 and 82 may be accessed. Link 80 contains a descriptive listing of each of the assets

within a functional area. Link 82 contains individual pages for each tier, where the assets which have been categorized in a particular tier are listed therein.

Disclosed in Fig. 6 is an interactive screen display 150 which is presented when link 78 is selected. Included in this screen display are a number of links 82 which when selected provide for the searching of the database in order to locate process assets which have been categorized according to a tiered structure. In the system described herein, a tiered categorization structure has been implemented which itemizes process assets according to their applicability to parts of the organization. Tier 0 has been designated to contain organization policy statements issued at levels higher than the organization which controls the system described herein. Tier 1 has been designated to include policy documents which apply to the particular business unit which controls the system. They may apply across all locations within a business unit.

Tier 2 assets may include various business unit processes and procedures which apply across a particular business unit level. In most cases, these assets may include implementations of or supporting documentation for Tier 0 or Tier 1 assets. Tier 3 assets may be those which do not apply across a particular business unit as a whole, but rather to a particular subset within a business unit, such as a specific location or program. Tier 3 assets may be only selectively added to the system and may be subject to security restrictions. An example of a Tier 3 asset may include a program configuration management process or a desk procedure for a security manager. Certain security limitations may be placed on a Tier 3 asset such that they are not accessible by all parties which have access to the system.

Finally, Tier 4 assets may be configured to include information for an organization which otherwise would not be classifiable in another one of the tiers, for example, objective evidence of following a process. Further, this tier may also include external links for accessing locations

which may have desired information, for example, links to program web sites containing objective evidence or other records.

In order to view one or more of the assets which fall within a particular tier, the link for the particular tier may be selected and as such a search may then be performed within the database to locate all process assets which are included within a particular categorization. As was described above, each asset stored in the database includes a listing of at least one classification identifier (within which tier designations are found) which is searchable when employing whatever database search engine is provided.

In order to perform a search, as an initial step, the user may select a particular link from the screen display indicating the particular tier within which the process assets are to be located. In the situation where the tier selected has limited accessibility, only selected system users, a security module may be employed to perform a check to determine if the particular system user has permission to access this information and to deny access if necessary. As an example, tiers 0, 1 and 2 may have applicability to the whole organization, and thus no access limitations exist, while tiers 3 and 4 have limited application to the organization, and as such only users who are affiliated with a particular business unit may retrieve these assets. In the situation where tiers 0, 1 and 2 have been selected, the system will generate the search query and begin the search. In the situation where either tiers 3 or 4 are selected, the system will perform a check as to whether the particular user has permission to access these assets. If the user does not have permission, the process will end and an error message may be displayed. If the user does have permission, a search query will be generated and the search is begun. The security module described herein may be configured such that access is limited to assets and asset information based on any number of classification identifiers included in the particular record.

Once the search query is generated, a search is performed of all records in the asset information database to locate those assets which have the selected tier as part of their classification identifiers. All assets which are identified as falling within a selected tier will be compiled and an HTML page generated which includes a listing of these process assets.

An example of such a page is screen display 160 shown in Fig. 7 which includes compilation of identified process assets. In this example, a listing is provided of the process assets which include "tier 2" as a classification identifier. In particular, the listing includes a number of links for accessing descriptive information about particular assets which falls within the tier. As an example, if the hypertext link 162 is selected (for benchmarking) from this page, an information page for the particular process asset is presented. An example of such an interactive screen display is disclosed in Fig. 8.

In screen display 170 an informational portion 172 is provided which includes selected portions of the identification information associated with the process asset. Also included in this portion of the screen display are a number of links 176 which when selected provide for the display of the electronic document associated with the process asset in a desired format, shown here to be either MS Word, Adobe Acrobat, or Postscript. As was described above, within the electronic document is the descriptive portion of the process or procedure.

Returning again to the diagram of Fig.5a, another search mode may be employed through the selection of link 76. According to this selection, process assets may be searched and displayed according to functional area. Disclosed in Fig. 9 is an example of a graphical screen display 170 which is presented when this option is selected. A textual screen display which includes a listing of all the process areas may also be presented if that option is selected. Returning again to Fig. 10, it can be seen that a number of hypertext links 171-176 are presented

which include textual descriptive information for the particular process areas, such as integrated engineering, business strategy development, capture management, etc.. Other links 177-185 may be presented for various support areas.

Once a system user selects a particular process area, the system will initiate a search and identify process assets which are included within the particular process area. As assets are identified, a security check may be performed to determine if the particular system user who is performing the test has permission to access the particular asset. If the system user does not have permission, the asset is not included in the compiled list. Once all assets and related information have been identified within a particular process area, the system will compile the listing of the assets in a desired order and in HTML format, and then presented it as an interactive screen display.

An example of such a screen display 180 is presented in Fig. 10. To access this screen, link 173 in screen 170 was selected. Displayed are the assets for the Capture Management process listed according to the tier they have been classified. Each asset is displayed as a hypertext link which may be selected so that additional information may be viewed. As with the selection and viewing of process assets in the tiered search, when an individual listing of an asset is selected, and an information page is presented for the particular asset. Any electronic documents may then be opened and viewed in a preferred document or image format.

Functionality may also be included in the system for providing a listing of all the process assets stored in the database in a desired format. This format may include organizing the process assets numerically, alphabetically, or a combination of both. Additional information may be included in the listing such as process area and tier within which each of the process assets is classified.

Returning again to the home page disclosed in Fig. 4 and the diagram of Figs. 5a and b, it is seen that a number of other functions are selectable for accessing and viewing assets and information related to assets. One selection which may be made through the interface disclosed in Fig. 4 is to view assets which have been classified as either sample or draft. As was described above, sample assets may be divided into two subsections, certified and sample. The certified assets are those which have been certified by a particular organization as being compliant with an approved set of standards and practices. Sample assets contain examples of process assets that have been contributed by individual programs or groups within the organization and provide for optional use across the organization. These assets may be accessed by users and may be tailored for the user's own use. Finally, a draft asset section may be accessed wherein the draft assets are assets which are in the draft or review stage. As with the assets described above with regards to viewing either through the tiered structure or the process area, a further term may be included in the identification information for an asset which designates as either a certified, sample or draft asset.

Selection of these options on the home page will provide for the presentation of screen displays such as those disclosed in Figs. 11-13. When the certified assets link 70 is selected from the home page, the system initiates a search and generates a screen display 190 such as that shown in Fig. 11. Screen display 190 includes a listing of certified assets which have been identified in the search, presented in a desired format.

Disclosed in Fig. 12, is a screen display 200 which is generated when link 74 on the homepage is selected and a search is initiated to locate draft assets. Screen display 200 includes a listing of draft assets which have been identified in the search, presented in a desired format. .

Finally, disclosed in Fig. 13, is screen display 210 which is generated when link 72 on the home page is selected and a search to locate sample assets is performed. Screen display 210 includes a listing of sample assets which have been identified in the search, presented in a desired format. With regards to the listing assets provided in screen displays 190, 200, and 210, the system user simply selects the link for a particular asset in order to view additional information and eventually access the electronic document.

According to the system described herein, another environment in which a particular asset may be presented is within a larger overall process or a "process maturity road map". The road map may be employed to provide direction to individuals in a particular organization to what process and procedures shall be employed at different stages of a project or program. As such, the system may be configured to include one or more screen displays which include descriptive information as to the work process being performed and links to process assets which are to be employed at the different stages.

Further, the road map may identify documentation required for a program and provide corresponding samples. The road map provides a top-level view of documentation that is required during the program's initial stages to achieve compliance with a pre-set standard. It also identifies items that need to be addressed in order to obtain various levels of process maturity. The intent of the road map is to simplify the manager's task in identifying the program documentation that is required. This simplification may occur because the road map provides a checklist of all required documentation along with access to examples. For example, on day one of a program, a program manager may not need to search for documents because the documents will be easily accessible through hyperlinks which provide links to examples and templates and provide references to particular sets.

In the road map incorporated into the system described herein, a sequence of screen displays may be accessible by a system user, each of which includes descriptions of particular stages in the program development process. Referring again to Fig. 5a, link 68 may be selected on the home page and a series of screen displays (link 86) may be presented. Included on these displays may be textual descriptive information, as well as links to assets which may be accessed and viewed at particular stages of a program or project. An example screen display 220 for a road map is disclosed in Fig. 16. Included therein are links through which any number of assets which are employable during the first one to three months of a particular program may be accessed. There is then a separate listing of links which are selectable to access assets which are applicable during another stage of the program, and finally a listing of assets is provided which are employable during the final stages of a program or to provide a re-cap or to act as an information gathering function with regards to a particular program or project. Once a particular asset is selected, the identification information for the asset may be presented, and the system user is then provided the option of opening any associated electronic documents in a desired format.

As a basic way to search, the system described herein may further include a search page which in addition to providing the functionality to search by process area and tier, provides the functionality to search by key word, asset number, or any other identifying information. A search by key word will allow the user to enter into any field a string of ASCII characters. The search engine will find and display all assets containing the strings in the title or the contents. Finally, the functionality may also be included for performing compound searches. For example, if a system user wishes to search a particular tier but for only assets within a particular process area, multiple search terms may be entered and the search engine will employ these to locate the

matching assets. The search function may be initiated through selection of link 92 in the diagram of Fig. 5b.

As the system is employed and various processes and assets evolve over time, it may become necessary to make changes to one or more of the assets. Incorporated into the system described herein is a mechanism for submitting change requests, viewing change requests which have been submitted by others, viewing recently amended assets, as well as viewing the status of a submitted change request within the system.

As was shown in Figs. 3a and b, one or more change requests 124 may be incorporated within a particular process asset 120. As stored within the database, the change request is a separate record which is accessible through performance of a search using identification information unique to that change request, or through opening a particular asset and accessing and change requests which are associated therewith. Through selection of change request link 93 in Fig. 5 b, a screen display 230 such as that disclosed in Fig. 15 may be presented to the system user. This screen display provides numerous options for accessing and displaying change requests and data related to the change requests. For example a listing of change requests in HTML format may be compiled through selection of the link 232. A form for entering a change request may be presented through selection of link 231. A listing of assets which have been recently amended may be presented by selection of link 236. Finally the process for change control may be presented through selection of link 234. The change request approval process will be described in greater detail below.

Before a change request may be implemented as a change directive, it goes through various review steps where input to the final product is provided by a lot of different parties within the organization. For example a change request may need review and approval of a

engineering group, a review board, as well as a quality review board. As a change request goes through the review process it may be desirable to view the status of the change request, review comments of the reviewers, as well as other information which may be relevant to the approval of a change request. According to the system described herein, the mechanism is provided to update the status of the change request over the data network as it is being reviewed by the various parties. This status information can be included in the classification identifiers for the change request and links may be provided to electronic documentation when a particular change request is reviewed.

The foregoing description of the present invention has been presented for purposes of illustration and description. Furthermore, the description is not intended to limit the invention to the form disclosed herein. Consequently, variations and modifications commensurate with the above teachings, and the skill or knowledge of the relevant art, within the scope of the present invention. The embodiments described hereinabove are further intended to explain best modes known for practicing the invention and to enable others skilled in the art to utilize the invention in such, or other, embodiments and with various modifications required by the particular applications or uses of the present invention. It is intended that the appended claims be construed to include alternative embodiments to the extent permitted by the prior art.

CLAIMS

1. A web-based system for storing and accessing assets and associated information comprising:

a first database configurable to store assets and/or associated information wherein, each record in the database includes a plurality of searchable classification identifiers and at least one data link which provides an association with one or more of the other records in the database; and

a communications interface accessible over a data network to which the web-based system is connectable, wherein said communications interface is configurable to present at least one interactive screen display through which search information may be entered and retrieved data viewed; and

a search engine configurable to employ the search information received through at least one interactive display to search the assets and/or associated information to identify any of the classification identifiers which match the search information, compile all the identified assets and/or associated information in predetermined format, and present the compiled information such that it is viewable through the communications interface.

2. The system of claim 1 further comprising a second database which includes assets stored as electronic documents which are accessible through access of at least one of the records stored in the first database.

3. The system of claim 2 wherein the first and second databases are resident on a network server and each of the records and assets has an link through which selected portions of the record and asset may be viewable through the at least one interactive screen display.

4. The system of claim 1 wherein the assets and associated information relate to process and procedures employed by an organization.

5. The system of claim 4 wherein the classification searchable identifiers include at least one of: a plurality of tiers within which the asset has been classified, process area within which the asset has been classified, identification number assigned to the asset, and organization which created the asset.

6. The system of claim 5 wherein the tiers are organized such that the assets and/or associated information associated with a particular tier within the plurality of tiers has a unique applicability to a particular portion of the organization.

7. The system of claim 1 wherein the associated information may include at least one of: change requests associated with one or more of the assets, change directives, associated with the change requests and the assets, identified process areas, documents which comprise a particular one of the processes and procedures.

8. The system of claim 1 wherein the screen displays and the compiled information configured in an HTML format so as to be viewable through use of a web browser.

9. The system of claim 1 further a security device employable in conjunction with the communications interface which may limit access to one or more of the assets and associated information base on predetermined criteria.

10. The system of claim 1 wherein a plurality of the interactive screen displays are employable as part of the communications interface, and the plurality of screen displays include navigation buttons which are selectable so as to move to one of the interactive screen displays employable for searching using at least one of the identifiers.

11. The system of claim 7 further comprising means to search the database to extract and view status information for the change request stored therein.

12. The system of claim 1 selected of the assets and/or associated information is accessible through specially configured interactive displays which provide a roadmap for performing tasks.

Document Evidence

13. A web-based computer system for storing and providing access to a plurality of documents comprising:

a centralized server device connectable to a data network, wherein said server comprises:

a communications interface which provides for processing communications signals transmitted and received over the data network;

an asset information database, which includes a plurality of records relating to particular assets, wherein each item in the database includes at least one searchable classification identifier;

a search engine configurable to employ the search terms provided through the interactive screen displays to identify and retrieve the assets and/or associated information which include the classification identifier employed in the search term, wherein the search engine may configure retrieved assets and/or associated information; and

a display page generator configurable to compile the retrieved assets and/or associated information in a format which is presentable through the communications interface

14. The system of claim 13 further comprising a second database configurable to store the assets as electronic documents which are accessible through access of at least one of the records stored in the asset information database.

15. The system of claim 13 wherein the communications interface provides for establishment a connection with the server through use of a commercially available web browser.

16. The system of claim 13 wherein the records and the assets are related to processes and procedures employed by an organization.

17. The system of claim 16 wherein the additional interactive screen displays provide for performing a search wherein the classification identifier comprises:

classification within one of a plurality of tiers;

classification within a particular process area;

association with a particular portion of the organization;

assets which have an assigned designation; and

change requests associated with one or more of the assets.

18. The system of claim 13 further comprising a security module employable to limit search results to preapproved portions of the assets and/or associated information.

19. The system of claim 13 wherein the server is configurable on a personal computer organization of search results organized by identifier are stored in existing flat files which are stored in the database and presentable through the communications interface.

20. The system of claim 13 wherein the database is resident on a network server and each of the records in the database has a link associated therewith.

21. The system of claim 13 wherein the asset database is distributed across the data network and the records within the database are accessible through use of the communications interface.

22. The system of claim 14 wherein the display page generator comprises a Cold Fusion server which provides for conversion of data extracted from the asset information and assets database into HTML pages.

23. A method of providing access to database information in a web based computer system comprising:

providing at least one database which includes a plurality of records for asset and/or asset related information, wherein each of the records in the at least one database includes at least one classification identifier and at least one of the records includes a data link to other records in the database;

presenting a first interactive interface accessible over a data network which includes navigation function employable to move to at least one other interactive interface which in turn is employable for generating at least one search term for performing a search of the database;

in response to selection of at least one search term, where the search term includes at least one classification identifier, performing a search of the database to identify all the records which have classification identifiers which match the search term; and

compiling all the matching records in a format which is presentable over the data network.

24. The method of claim 23 wherein the assets and/or asset information relate to processes and procedures and the classification identifiers include at least one of:

classification within one of a plurality of tiers;

classification within a particular process area;

association with a particular portion of the organization;

assets which have an assigned designation; and

change requests associated with one or more of the assets.

25. The method of claim 24 wherein the tiers are organized such that the assets and/or asset information classified within a particular tier within the plurality of tiers has a unique applicability to a particular portion of the organization.

26. The method of claim 25 wherein the associated information may include at least one of: change requests associated with one or more of the assets, change directives, associated with the change requests and the assets, identified process areas, documents which comprise a particular one of the processes and procedures.

27. The method of claim 23 wherein the data network comprises at least one of: the Internet.

28. The method of claim 23 further including the step of analyzing identification information of system users in order to make a determination as to what records in the database will be presented.

29. The method of claim 23 further including the step of retrieving and presenting a flat file in response to receipt of at least one search term.

30. The method of claim 23 wherein the resultant interactive screen display further includes at least one hypertext link which is selectable in order to retrieve additional information from the database relating to the assets and/or related information.

31. A method of compiling assets and associated information in a web-based computer system, comprising:

identifying the assets and associated information to be stored, where each item or the assets and associated information configured for placement in the database as an individual record;

categorizing each of the records with at least one predetermined category;

appending at least one categorization identifier to each of the records, wherein each of the categorization identifiers relates to the at least one predetermined category;

identifying any relevant links between the records and amending the records to include same;

generating a listing of links for accessing each of the records in the database.

32. The system of claim 31 wherein the assets and associated information relate to process and procedures employed by an organization.

33. The system of claim 32 wherein the classification searchable identifiers include at least one of: a plurality of tiers within which the asset has been classified, process area within which the asset has been classified, identification number assigned to the asset, and organization which created the asset.

34. The system of claim 33 wherein the tiers are organized such that the assets and/or associated information associated with a particular tier within the plurality of tiers has a unique applicability to a particular portion of the organization.

ABSTRACT OF THE DISCLOSURE

A system and method for the organization and storage of organizational assets such that these items are accessible through employment of various web-based tools. The system includes a database within which a number of assets and/or related information may be stored. Included with each entry in the database is at least one classification identifier which is searchable. A user of the system described herein may access the system over a data network such as the Internet, and through the employment of various interactive screen displays, initiate searches, identify matching assets, and view listings of assets.

Docket: 6454/6/5/99

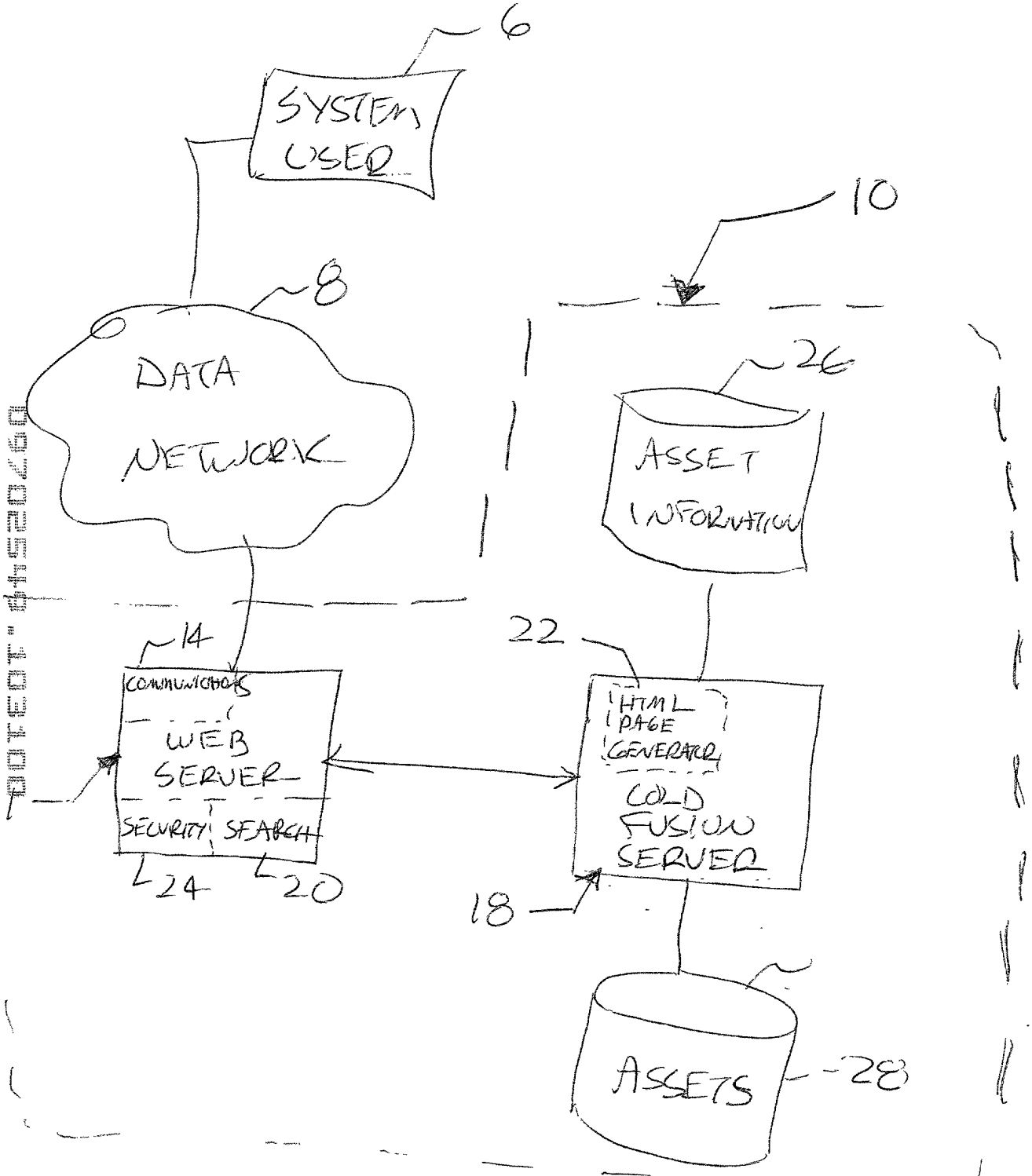

6
SYSTEM USER
10
8
DATA NETWORK
26
ASSET INFORMATION
14
COMMUNICATOR
WEB SERVER
SECURITY
SEARCH
24
20
22
HTML PAGE GENERATOR
COLD FUSION SERVER
18
ASSETS
28

FIG. 1

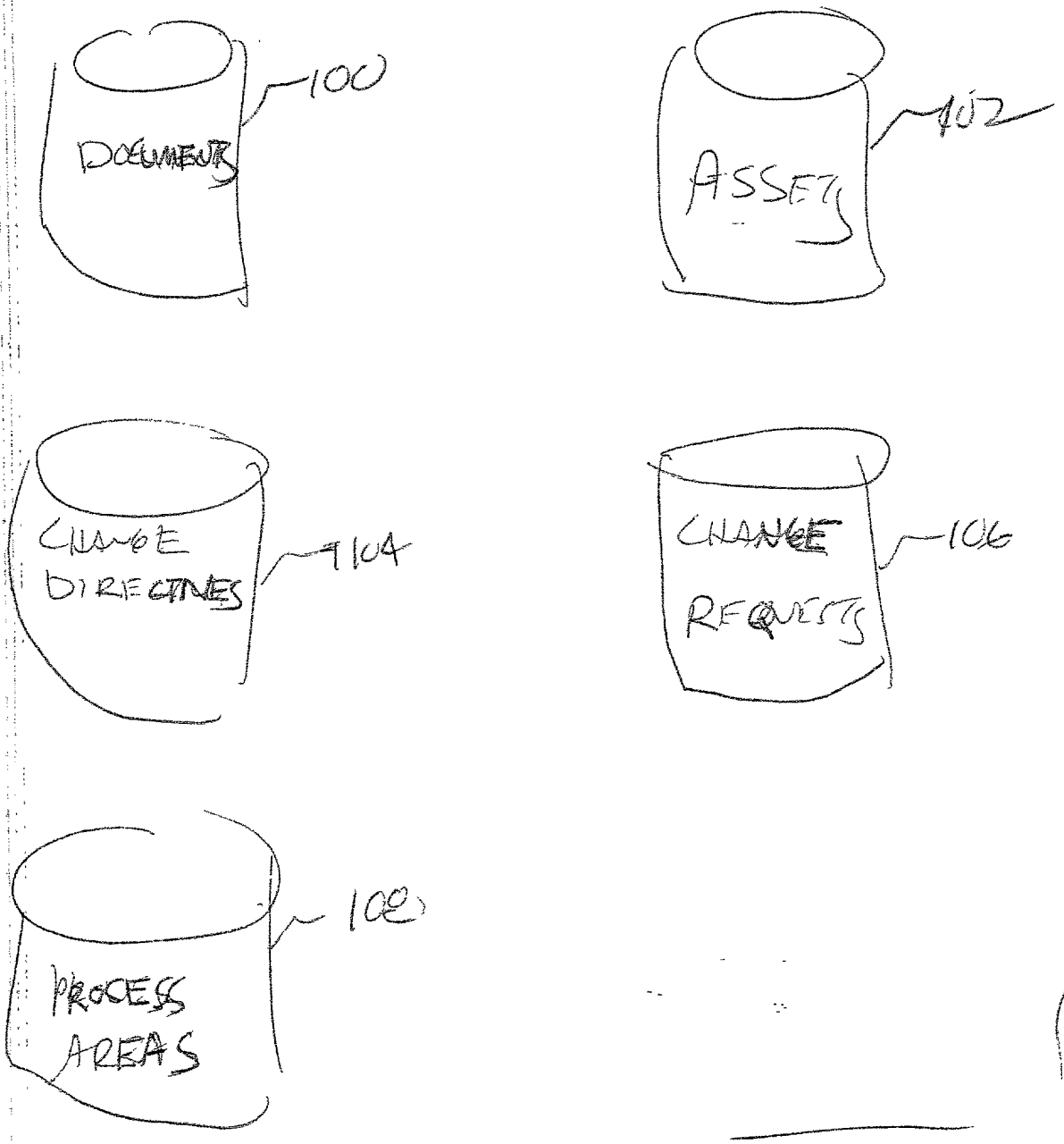

DOCUMENTS
100
ASSETS
102
CHANGE DIRECTIVES
104
CHANGE REQUESTS
106
PROCESS AREAS
108
126

FIG. 2

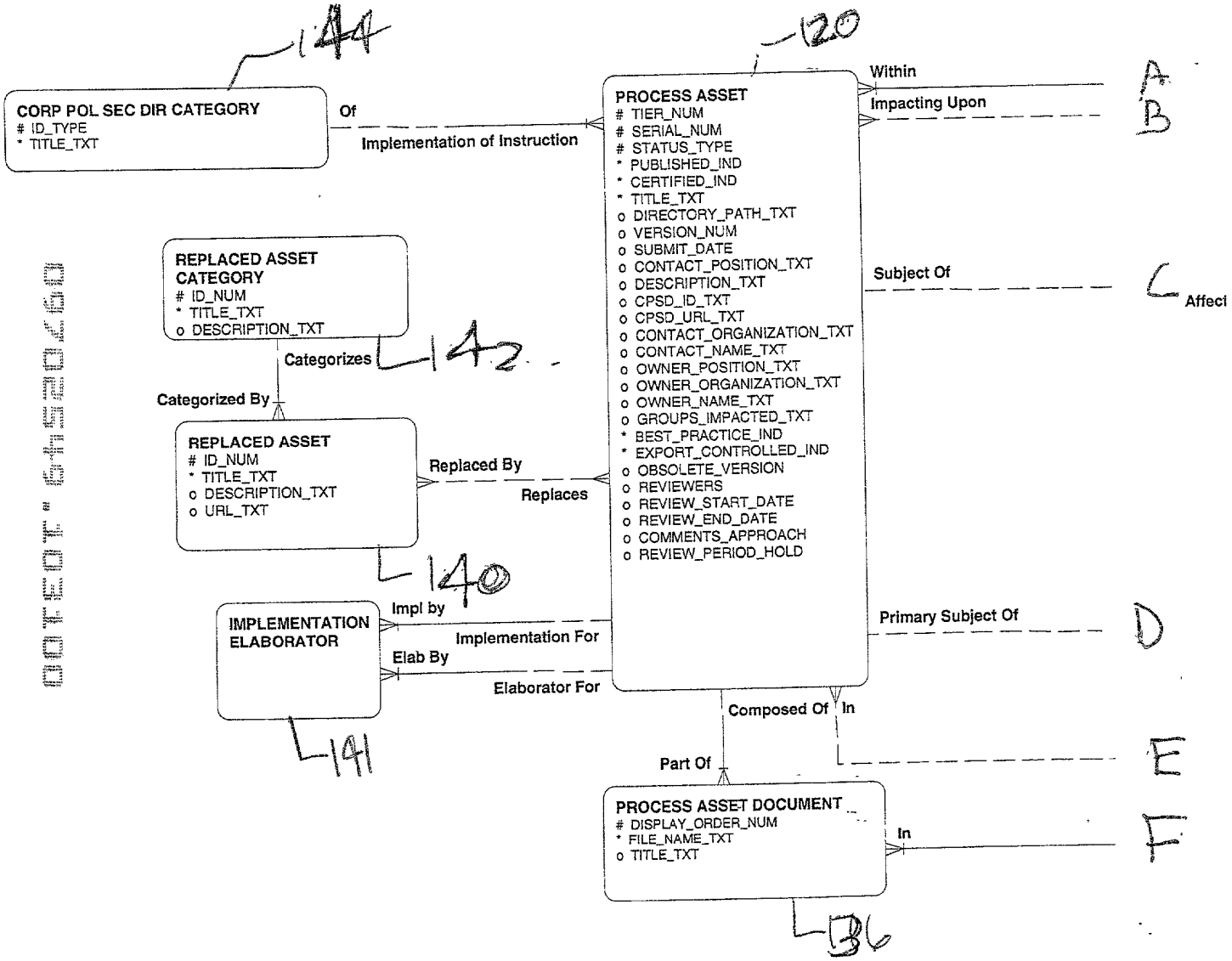

144
120
CORP POL SEC DIR CATEGORY
ID_TYPE
* TITLE_TXT
Of
Implementation of Instruction
PROCESS ASSET
TIER_NUM
SERIAL_NUM
STATUS_TYPE
* PUBLISHED_IND
* CERTIFIED_IND
* TITLE_TXT
o DIRECTORY_PATH_TXT
o VERSION_NUM
o SUBMIT_DATE
o CONTACT_POSITION_TXT
o DESCRIPTION_TXT
o CPSD_ID_TXT
o CPSD_URL_TXT
o CONTACT_ORGANIZATION_TXT
o CONTACT_NAME_TXT
o OWNER_POSITION_TXT
o OWNER_ORGANIZATION_TXT
o OWNER_NAME_TXT
o GROUPS_IMPACTED_TXT
* BEST_PRACTICE_IND
* EXPORT_CONTROLLED_IND
o OBSOLETE_VERSION
o REVIEWERS
o REVIEW_START_DATE
o REVIEW_END_DATE
o COMMENTS_APPROACH
o REVIEW_PERIOD_HOLD
Within
Impacting Upon
A
B
REPLACED ASSET CATEGORY
ID_NUM
* TITLE_TXT
o DESCRIPTION_TXT
Categorizes
142
Categorized By
Subject Of
C
Affect
REPLACED ASSET
ID_NUM
* TITLE_TXT
o DESCRIPTION_TXT
o URL_TXT
Replaced By
Replaces
140
IMPLEMENTATION ELABORATOR
Impl by
Implementation For
Elab By
Elaborator For
141
Primary Subject Of
D
Composed Of
In
E
Part Of
PROCESS ASSET DOCUMENT
DISPLAY_ORDER_NUM
* FILE_NAME_TXT
o TITLE_TXT
In
F
136

FIG. 3a

9/24/99

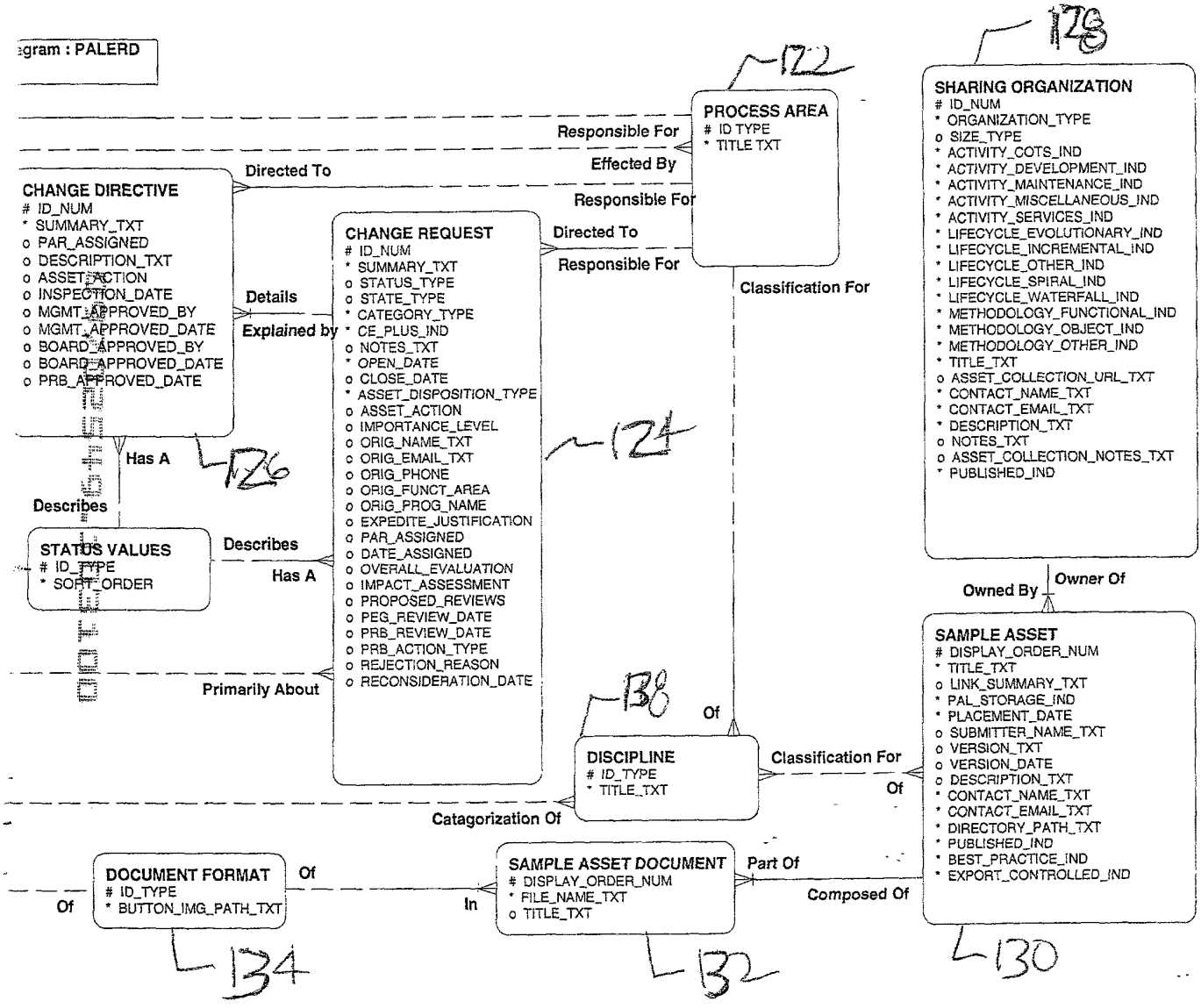

gram : PALERD
PROCESS AREA
ID TYPE
* TITLE TXT
SHARING ORGANIZATION
ID_NUM
* ORGANIZATION_TYPE
o SIZE_TYPE
* ACTIVITY_COTS_IND
* ACTIVITY_DEVELOPMENT_IND
* ACTIVITY_MAINTENANCE_IND
* ACTIVITY_MISCELLANEOUS_IND
* ACTIVITY_SERVICES_IND
* LIFECYCLE_EVOLUTIONARY_IND
* LIFECYCLE_INCREMENTAL_IND
* LIFECYCLE_OTHER_IND
* LIFECYCLE_SPIRAL_IND
* LIFECYCLE_WATERFALL_IND
* METHODOLOGY_FUNCTIONAL_IND
* METHODOLOGY_OBJECT_IND
* METHODOLOGY_OTHER_IND
* TITLE_TXT
o ASSET_COLLECTION_URL_TXT
* CONTACT_NAME_TXT
* CONTACT_EMAIL_TXT
* DESCRIPTION_TXT
o NOTES_TXT
o ASSET_COLLECTION_NOTES_TXT
* PUBLISHED_IND
Responsible For
Effected By
Directed To
Responsible For
CHANGE DIRECTIVE
ID_NUM
* SUMMARY_TXT
o PAR_ASSIGNED
o DESCRIPTION_TXT
o ASSET_ACTION
o INSPECTION_DATE
o MGMT_APPROVED_BY
o MGMT_APPROVED_DATE
o BOARD_APPROVED_BY
o BOARD_APPROVED_DATE
o PRB_APPROVED_DATE
Details
Explained by
CHANGE REQUEST
ID_NUM
* SUMMARY_TXT
o STATUS_TYPE
o STATE_TYPE
* CATEGORY_TYPE
* CE_PLUS_IND
o NOTES_TXT
* OPEN_DATE
o CLOSE_DATE
* ASSET_DISPOSITION_TYPE
o ASSET_ACTION
o IMPORTANCE_LEVEL
o ORIG_NAME_TXT
o ORIG_EMAIL_TXT
o ORIG_PHONE
o ORIG_FUNCT_AREA
o ORIG_PROG_NAME
o EXPEDITE_JUSTIFICATION
o PAR_ASSIGNED
o DATE_ASSIGNED
o OVERALL_EVALUATION
o IMPACT_ASSESSMENT
o PROPOSED_REVIEWS
o PEG_REVIEW_DATE
o PRB_REVIEW_DATE
o PRB_ACTION_TYPE
o REJECTION_REASON
o RECONSIDERATION_DATE
Directed To
Responsible For
Classification For
Has A
Describes
STATUS VALUES
ID_TYPE
* SORT_ORDER
Describes
Has A
Primarily About
Owned By
Owner Of
SAMPLE ASSET
DISPLAY_ORDER_NUM
* TITLE_TXT
o LINK_SUMMARY_TXT
* PAL_STORAGE_IND
* PLACEMENT_DATE
o SUBMITTER_NAME_TXT
o VERSION_TXT
o VERSION_DATE
o DESCRIPTION_TXT
* CONTACT_NAME_TXT
* CONTACT_EMAIL_TXT
* DIRECTORY_PATH_TXT
* PUBLISHED_IND
* BEST_PRACTICE_IND
* EXPORT_CONTROLLED_IND
Of
DISCIPLINE
ID_TYPE
* TITLE_TXT
Classification For
Of
Catagorization Of
DOCUMENT FORMAT
ID_TYPE
* BUTTON_IMG_PATH_TXT
Of
Of
In
SAMPLE ASSET DOCUMENT
DISPLAY_ORDER_NUM
* FILE_NAME_TXT
o TITLE_TXT
Part Of
Composed Of
122
128
126
124
138
134
132
130

FIG. 3b

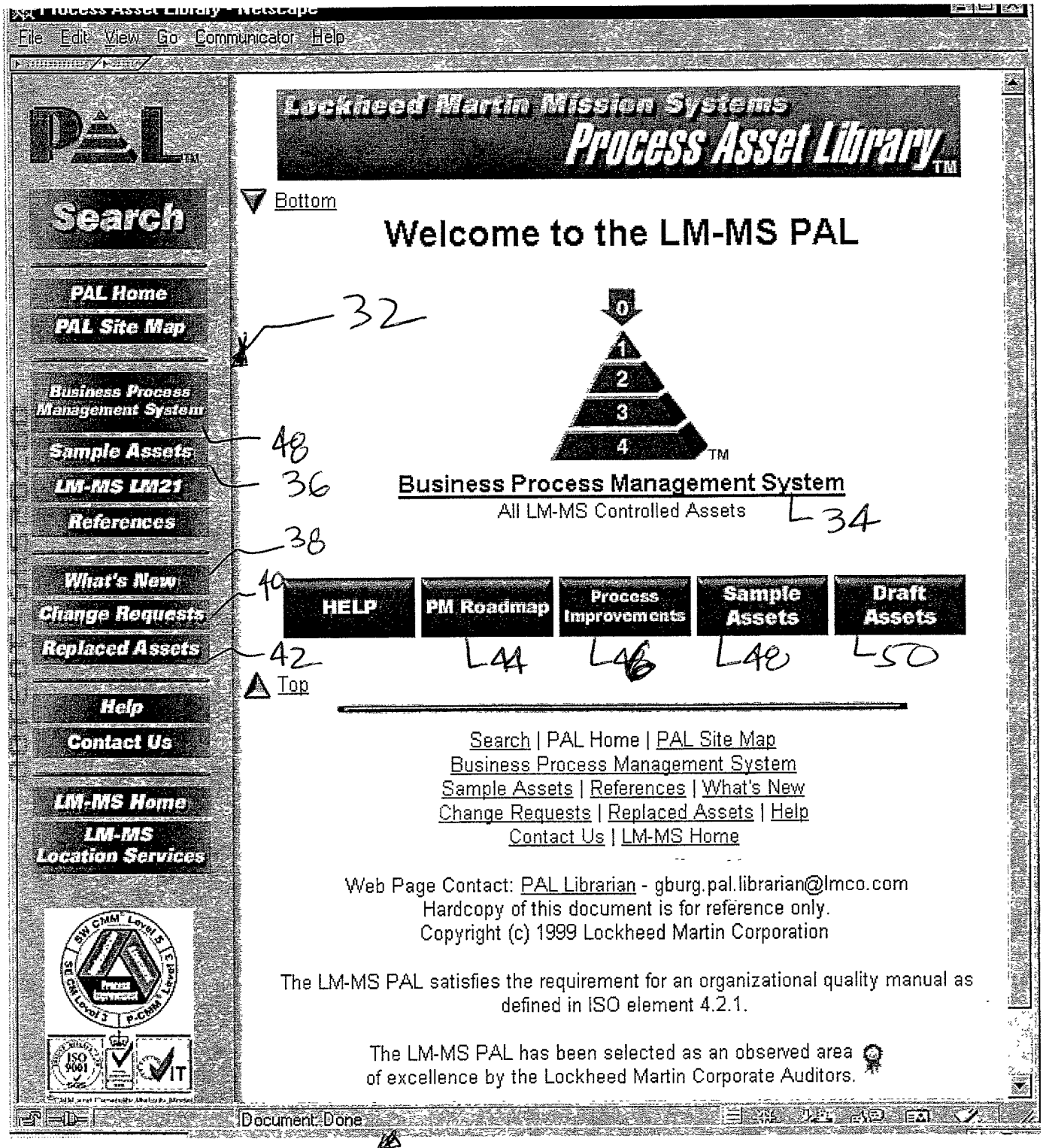

File Edit View Go Communicator Help
PAL
Search
PAL Home
PAL Site Map
Business Process Management System
Sample Assets
LM-MS LM21
References
What's New
Change Requests
Replaced Assets
Help
Contact Us
LM-MS Home
LM-MS Location Services
Lockheed Martin Mission Systems
Process Asset Library
Bottom
Welcome to the LM-MS PAL
0
1
2
3
4
Business Process Management System
All LM-MS Controlled Assets
HELP
PM Roadmap
Process Improvements
Sample Assets
Draft Assets
Top
Search | PAL Home | PAL Site Map
Business Process Management System
Sample Assets | References | What's New
Change Requests | Replaced Assets | Help
Contact Us | LM-MS Home
Web Page Contact: PAL Librarian - gburg.pal.librarian@lmco.com
Hardcopy of this document is for reference only.
Copyright (c) 1999 Lockheed Martin Corporation
The LM-MS PAL satisfies the requirement for an organizational quality manual as defined in ISO element 4.2.1.
The LM-MS PAL has been selected as an observed area of excellence by the Lockheed Martin Corporate Auditors.
Document: Done
32
48
36
38
40
42
34
44
46
48
50
30

FIG. 4

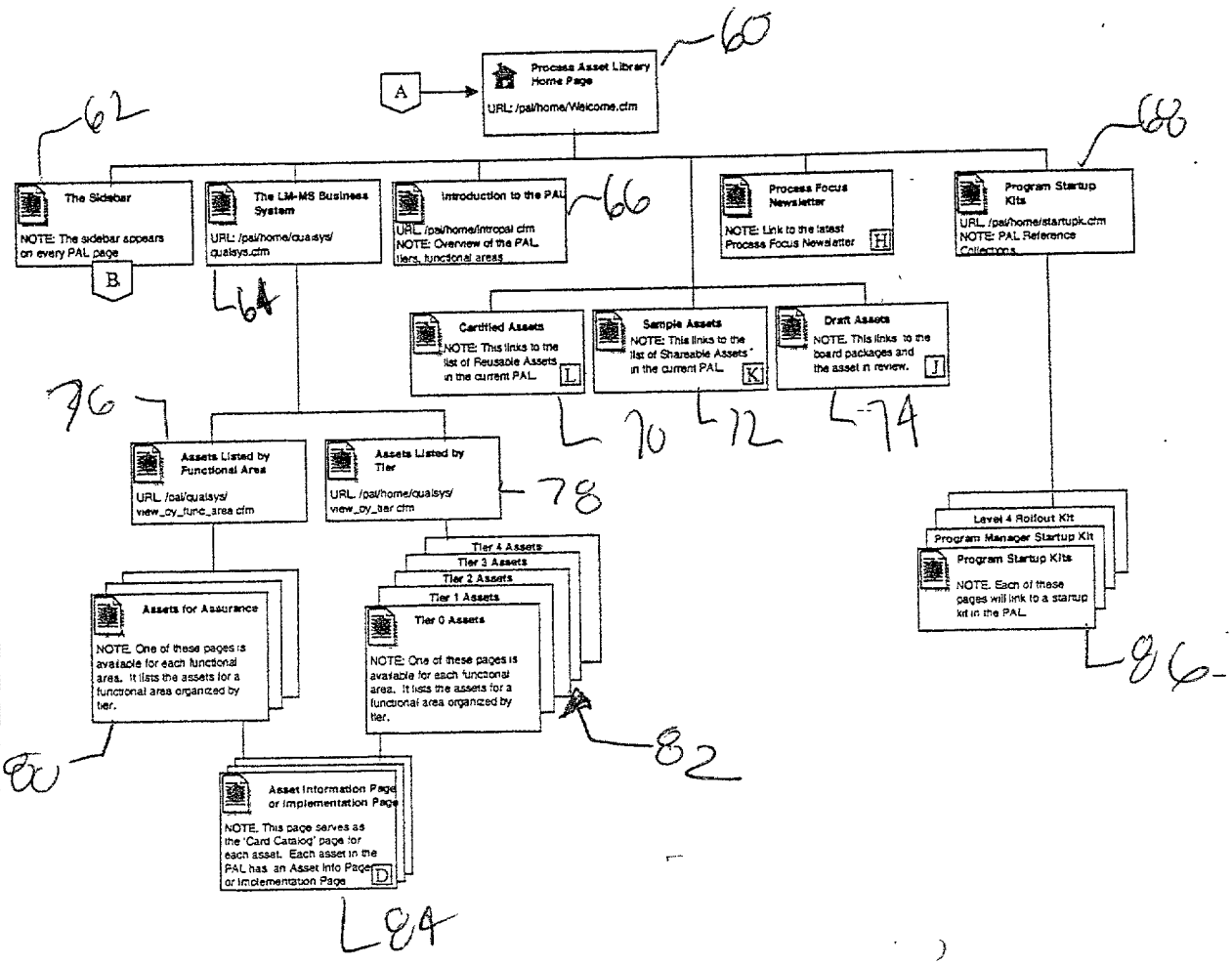

A
Process Asset Library Home Page
URL: /pal/home/Welcome.cfm
60
62
The Sidebar
NOTE: The sidebar appears on every PAL page
B
The LM-MS Business System
URL: /pal/home/qualsys/qualsys.cfm
64
Introduction to the PAL
URL /pal/home/intropal.cfm
NOTE: Overview of the PAL tiers, functional areas
66
Process Focus Newsletter
NOTE: Link to the latest Process Focus Newsletter
H
Program Startup Kits
URL /pal/home/startupk.cfm
NOTE: PAL Reference Collections
68
Certified Assets
NOTE: This links to the list of Reusable Assets in the current PAL
L
70
Sample Assets
NOTE: This links to the list of Shareable Assets in the current PAL
K
72
Draft Assets
NOTE: This links to the board packages and the asset in review.
J
74
76
Assets Listed by Functional Area
URL /pal/qualsys/view_by_func_area.cfm
Assets Listed by Tier
URL /pal/home/qualsys/view_by_tier.cfm
78
Tier 4 Assets
Tier 3 Assets
Tier 2 Assets
Tier 1 Assets
Tier 0 Assets
NOTE: One of these pages is available for each functional area. It lists the assets for a functional area organized by tier.
82
Assets for Assurance
NOTE: One of these pages is available for each functional area. It lists the assets for a functional area organized by tier.
80
Asset Information Page or Implementation Page
NOTE: This page serves as the 'Card Catalog' page for each asset. Each asset in the PAL has an Asset Info Page or Implementation Page
D
84
Level 4 Rollout Kit
Program Manager Startup Kit
Program Startup Kits
NOTE: Each of these pages will link to a startup kit in the PAL
86

FIG. 5a

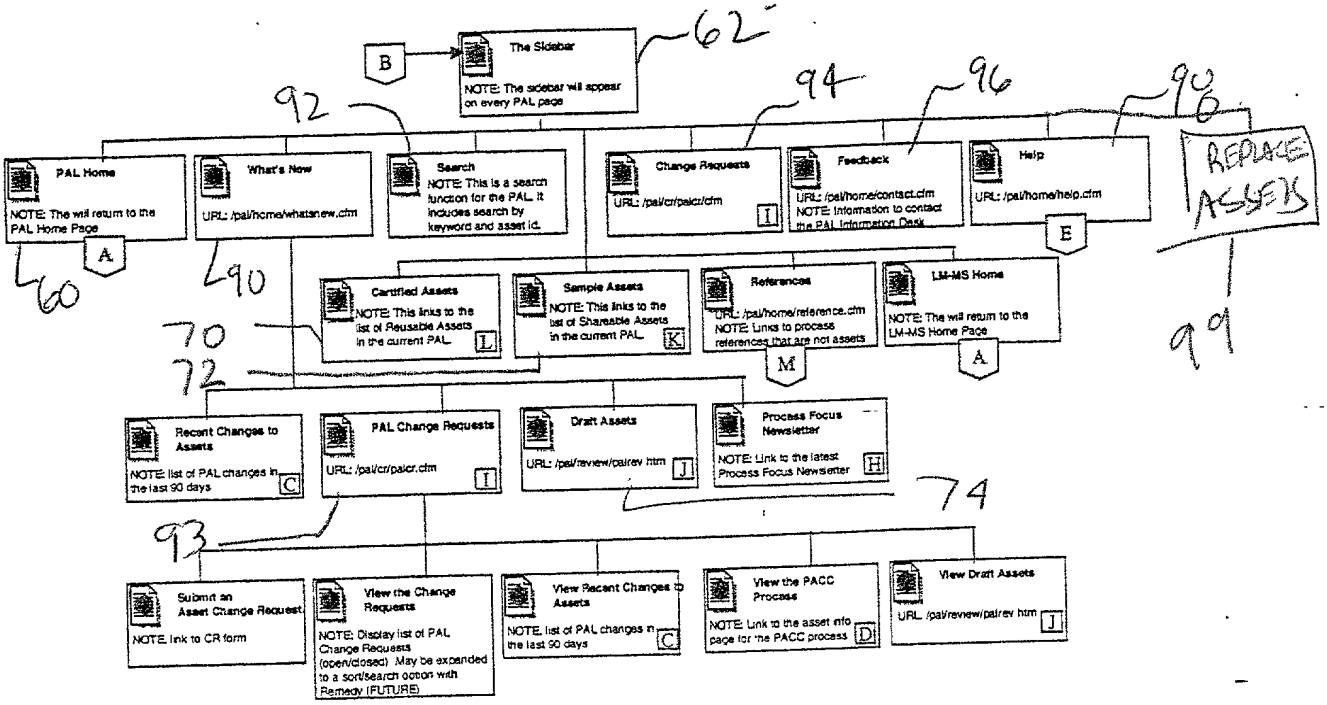
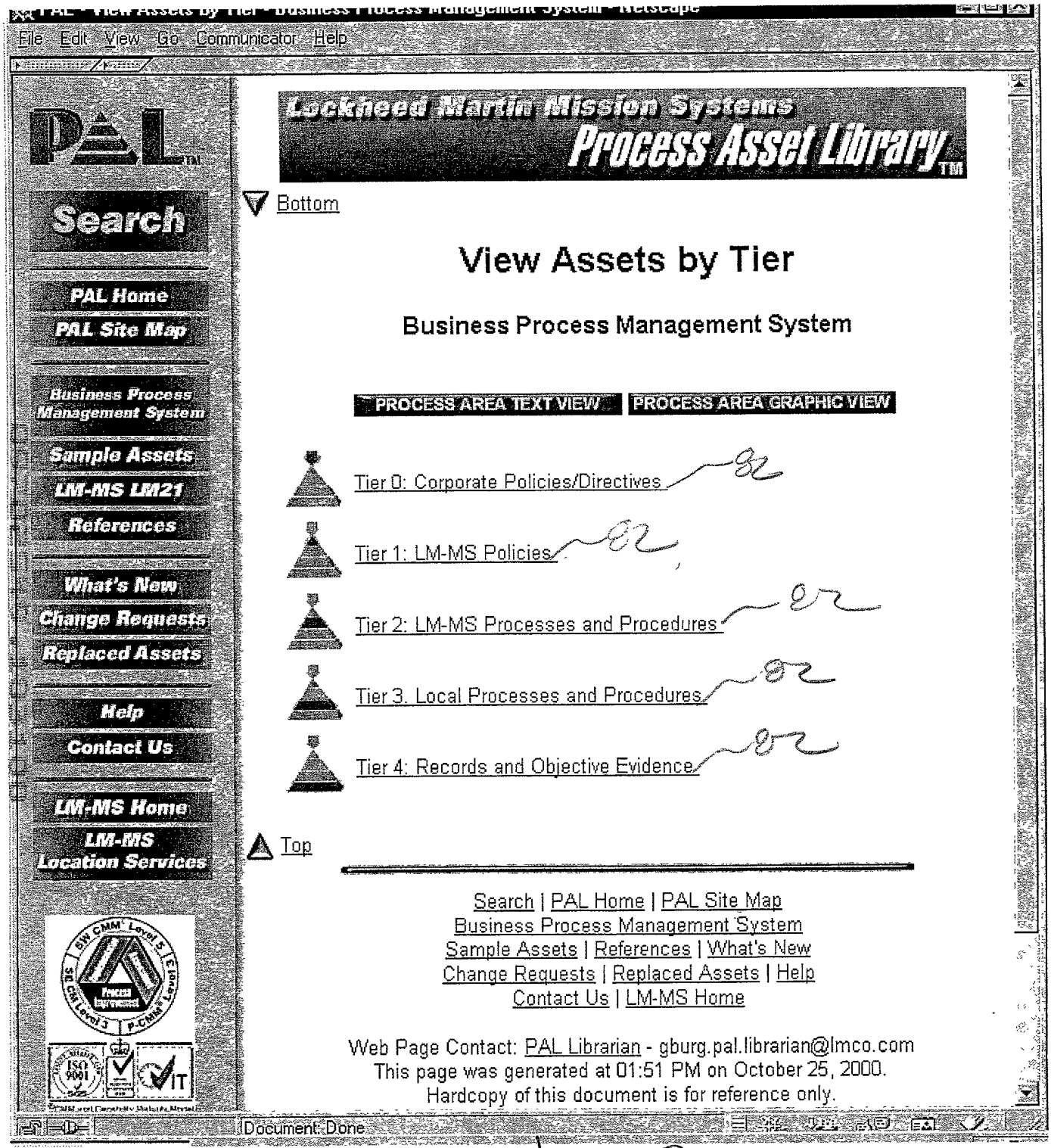

The Sidebar
NOTE: The sidebar will appear on every PAL page
62
B
92
94
96
98
PAL Home
NOTE: The will return to the PAL Home Page
A
60
What's New
URL: /pal/home/whatsnew.cfm
90
Search
NOTE: This is a search function for the PAL. It includes search by keyword and asset id.
Change Requests
URL: /pal/cr/palcr.cfm
I
Feedback
URL: /pal/home/contact.cfm
NOTE: Information to contact the PAL Information Desk
Help
URL: /pal/home/help.cfm
E
REPLACE ASSETS
99
Certified Assets
NOTE: This links to the list of Reusable Assets in the current PAL
L
70
72
Sample Assets
NOTE: This links to the list of Shareable Assets in the current PAL
K
References
URL: /pal/home/reference.cfm
NOTE: Links to process references that are not assets
M
LM-MS Home
NOTE: The will return to the LM-MS Home Page
A
Recent Changes to Assets
NOTE: list of PAL changes in the last 90 days
C
PAL Change Requests
URL: /pal/cr/palcr.cfm
I
Draft Assets
URL: /pal/review/palrev.htm
J
Process Focus Newsletter
NOTE: Link to the latest Process Focus Newsletter
H
74
93
Submit an Asset Change Request
NOTE: link to CR form
View the Change Requests
NOTE: Display list of PAL Change Requests (open/closed). May be expanded to a sort/search option with Remedy (FUTURE)
View Recent Changes to Assets
NOTE: list of PAL changes in the last 90 days
C
View the PACC Process
NOTE: Link to the asset info page for the PACC process
D
View Draft Assets
URL: /pal/review/palrev.htm
J

FIG FIG. 5b


File Edit View Go Communicator Help
PAL
Search
PAL Home
PAL Site Map
Business Process Management System
Sample Assets
LM-MS LM21
References
What's New
Change Requests
Replaced Assets
Help
Contact Us
LM-MS Home
LM-MS Location Services
Lockheed Martin Mission Systems
Process Asset Library
Bottom
View Assets by Tier
Business Process Management System
PROCESS AREA TEXT VIEW
PROCESS AREA GRAPHIC VIEW
Tier 0: Corporate Policies/Directives
Tier 1: LM-MS Policies
Tier 2: LM-MS Processes and Procedures
Tier 3. Local Processes and Procedures
Tier 4: Records and Objective Evidence
Top
Search | PAL Home | PAL Site Map
Business Process Management System
Sample Assets | References | What's New
Change Requests | Replaced Assets | Help
Contact Us | LM-MS Home
Web Page Contact: PAL Librarian - gburg.pal.librarian@lmco.com
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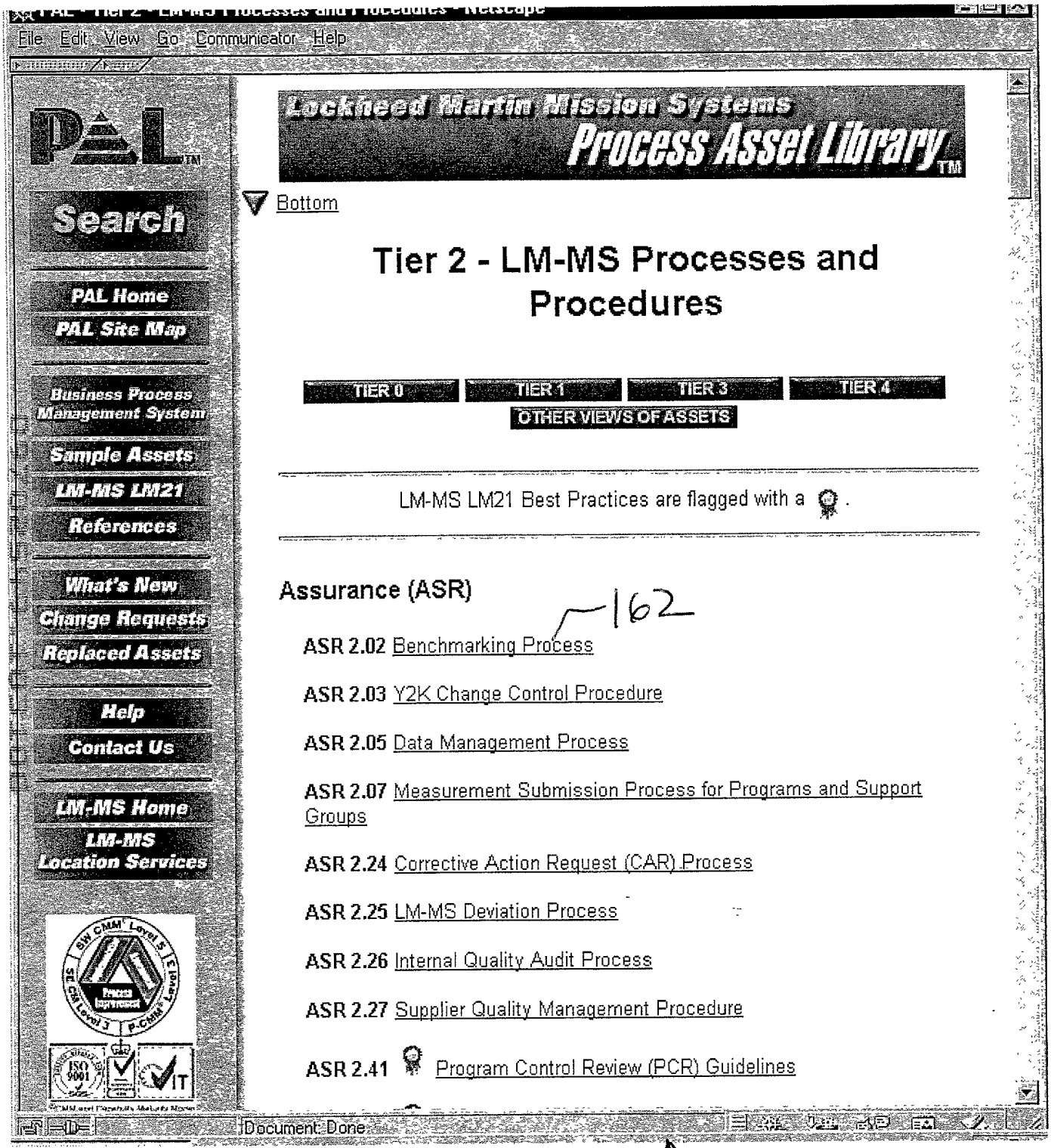
Hardcopy of this document is for reference only.
Document: Done

L150

FIG. 6


File Edit View Go Communicator Help
PAL
Search
PAL Home
PAL Site Map
Business Process Management System
Sample Assets:
LM-MS LM21
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TIER 1
TIER 3
TIER 4
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Assurance (ASR)
ASR 2.02 Benchmarking Process
ASR 2.03 Y2K Change Control Procedure
ASR 2.05 Data Management Process
ASR 2.07 Measurement Submission Process for Programs and Support Groups
ASR 2.24 Corrective Action Request (CAR) Process
ASR 2.25 LM-MS Deviation Process
ASR 2.26 Internal Quality Audit Process
ASR 2.27 Supplier Quality Management Procedure
ASR 2.41 Program Control Review (PCR) Guidelines
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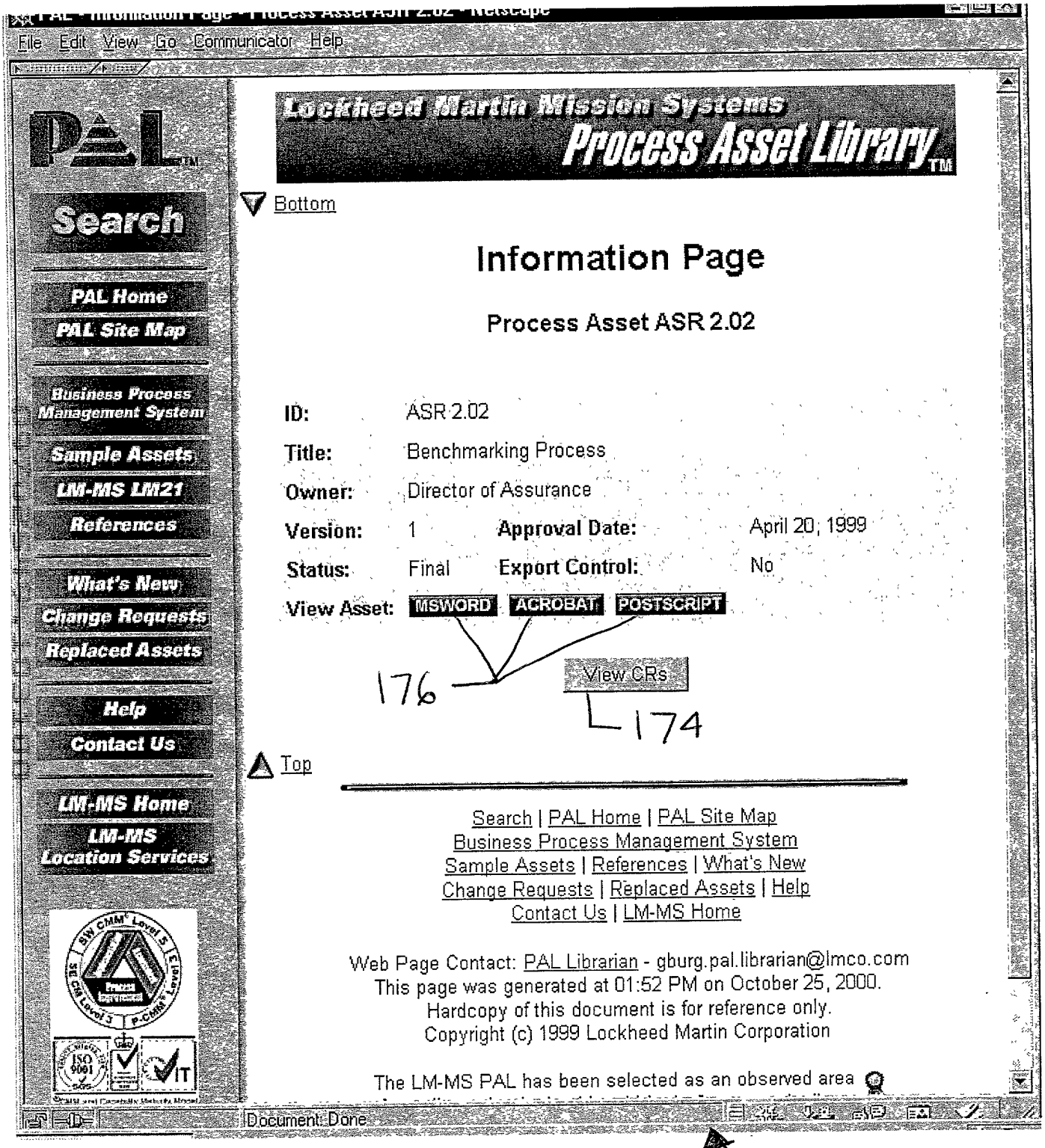
FIG. 7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Process Asset ASR 2.02
ID: ASR 2.02
Title: Benchmarking Process
Owner: Director of Assurance
Version: 1
Approval Date: April 20, 1999
Status: Final
Export Control: No
View Asset: MSWORD ACROBAT POSTSCRIPT
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View CRs
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The LM-MS PAL has been selected as an observed area
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FIG. 8

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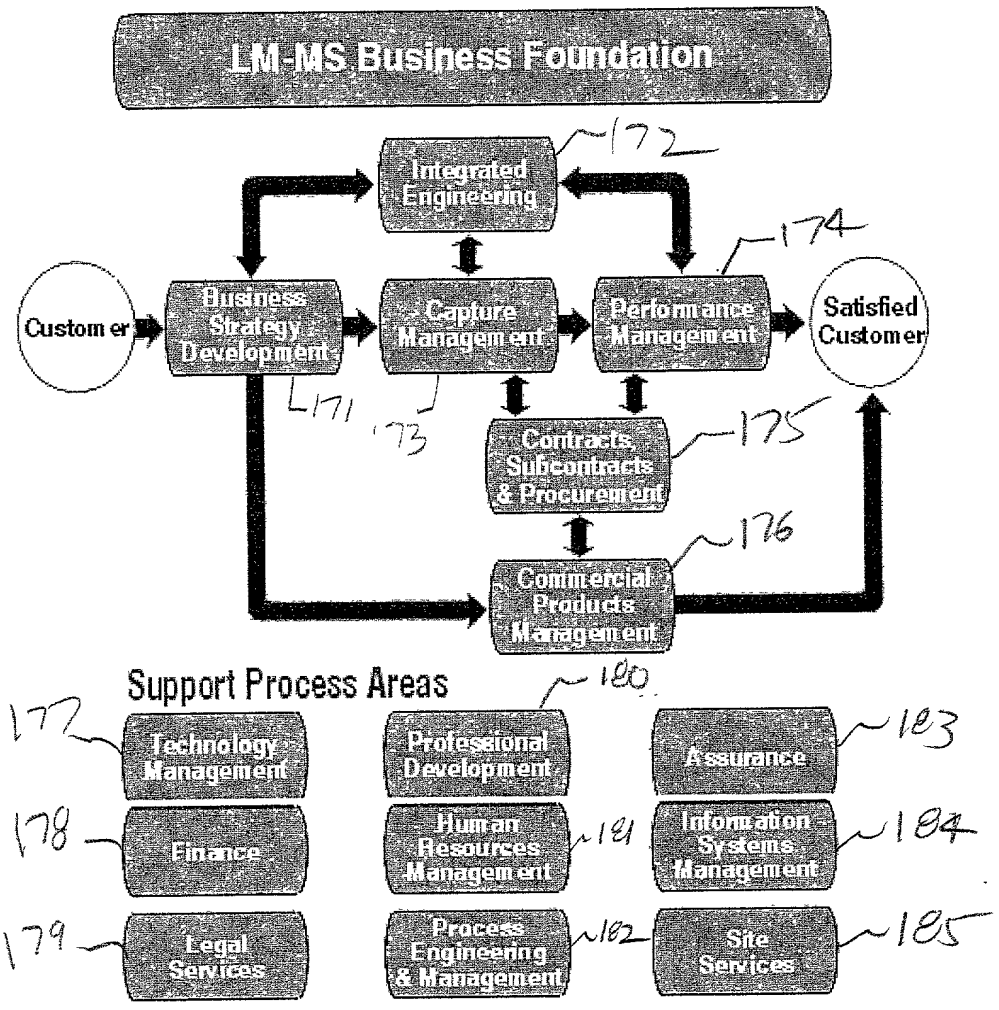
View Assets by Process Area

Business Process Management System

PROCESS AREA TEXT VIEW | TIER VIEW

Select Any Process Area to view assets.

Mission Systems Process Areas



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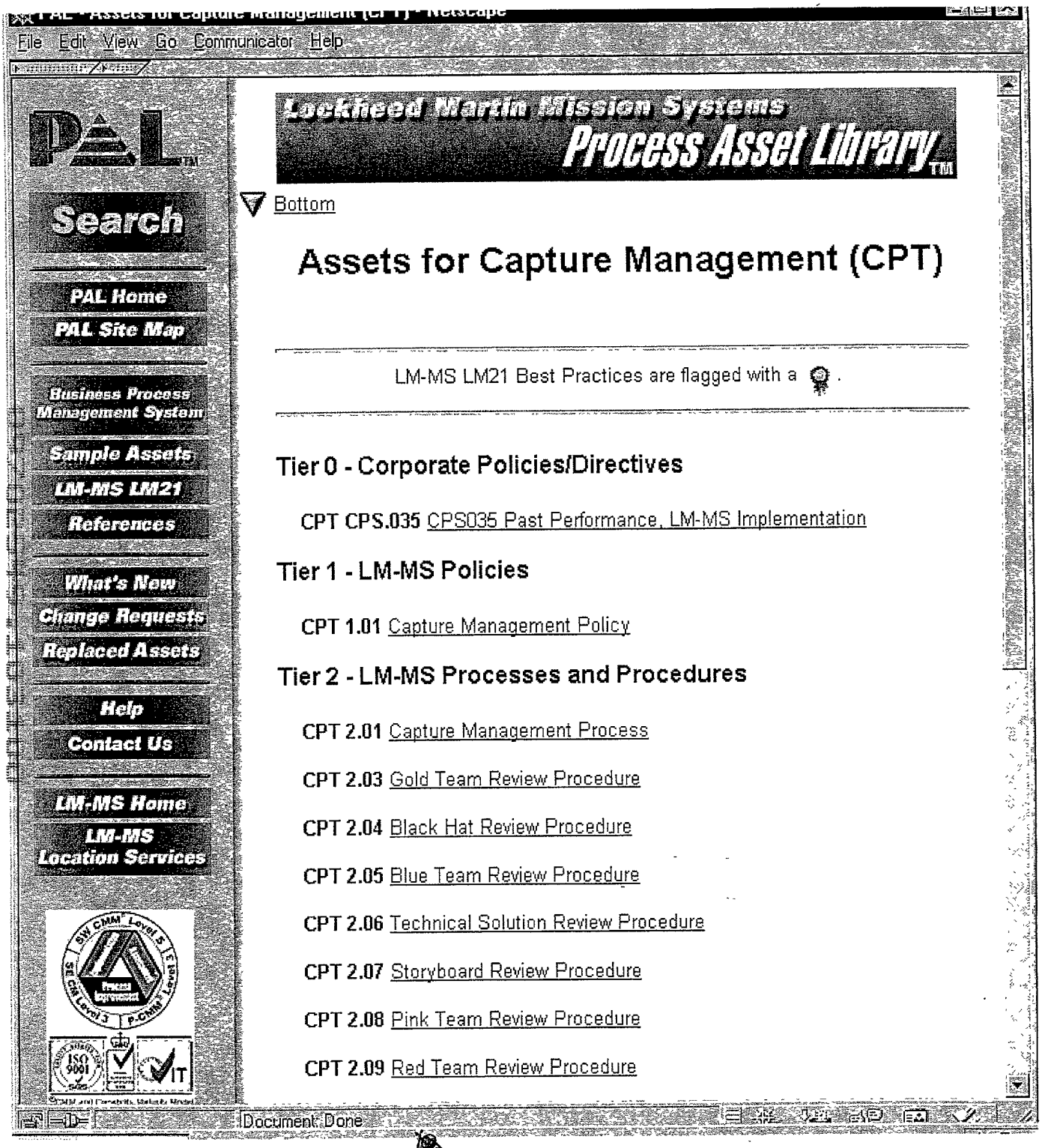
180 F16,98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Assets for Capture Management (CPT)
LM-MS LM21 Best Practices are flagged with a .
Tier 0 - Corporate Policies/Directives
CPT CPS.035 CPS035 Past Performance, LM-MS Implementation
Tier 1 - LM-MS Policies
CPT 1.01 Capture Management Policy
Tier 2 - LM-MS Processes and Procedures
CPT 2.01 Capture Management Process
CPT 2.03 Gold Team Review Procedure
CPT 2.04 Black Hat Review Procedure
CPT 2.05 Blue Team Review Procedure
CPT 2.06 Technical Solution Review Procedure
CPT 2.07 Storyboard Review Procedure
CPT 2.08 Pink Team Review Procedure
CPT 2.09 Red Team Review Procedure
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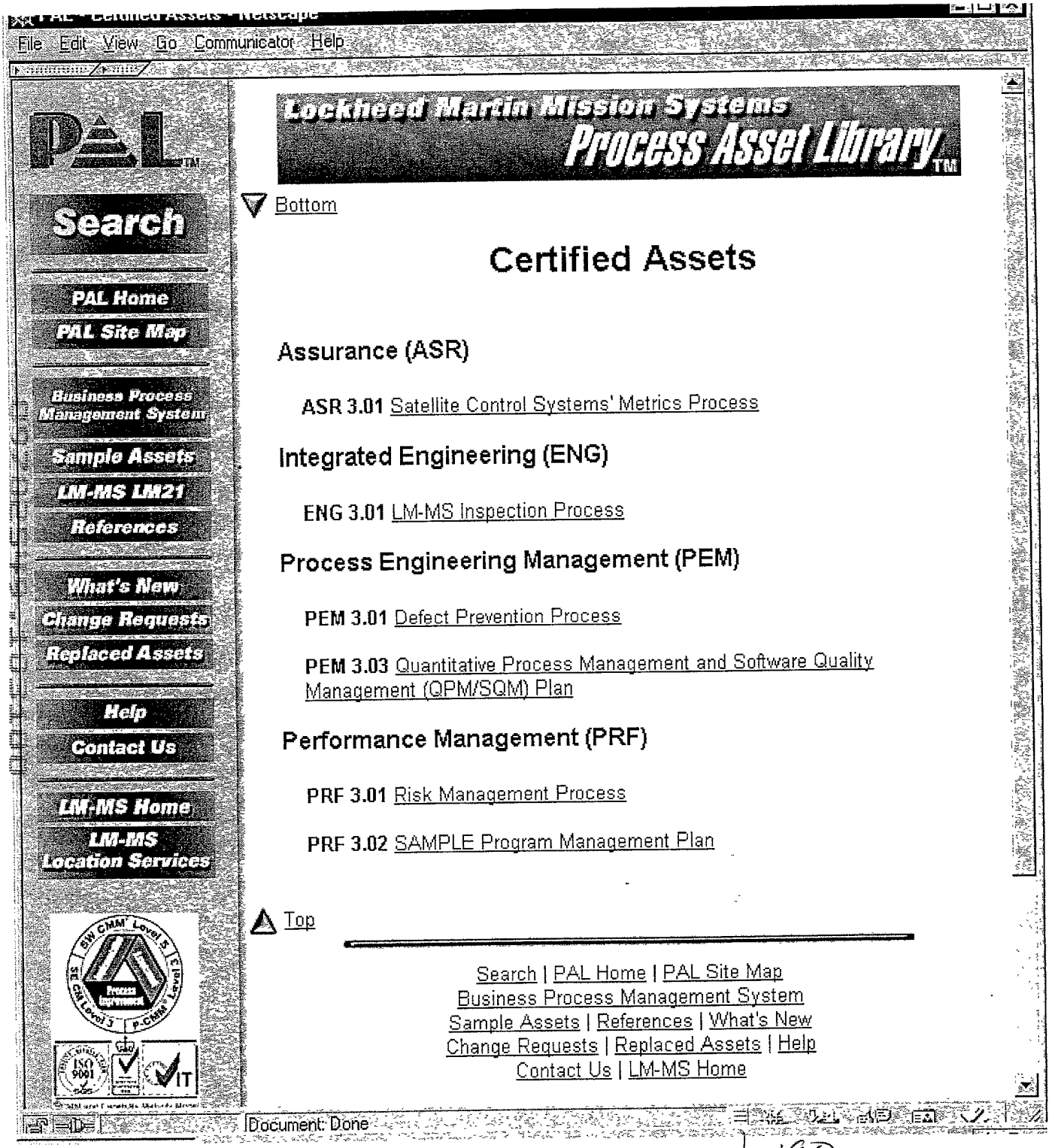
FIG. 10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ENG 3.01 LM-MS Inspection Process
Process Engineering Management (PEM)
PEM 3.01 Defect Prevention Process
PEM 3.03 Quantitative Process Management and Software Quality Management (QPM/SQM) Plan
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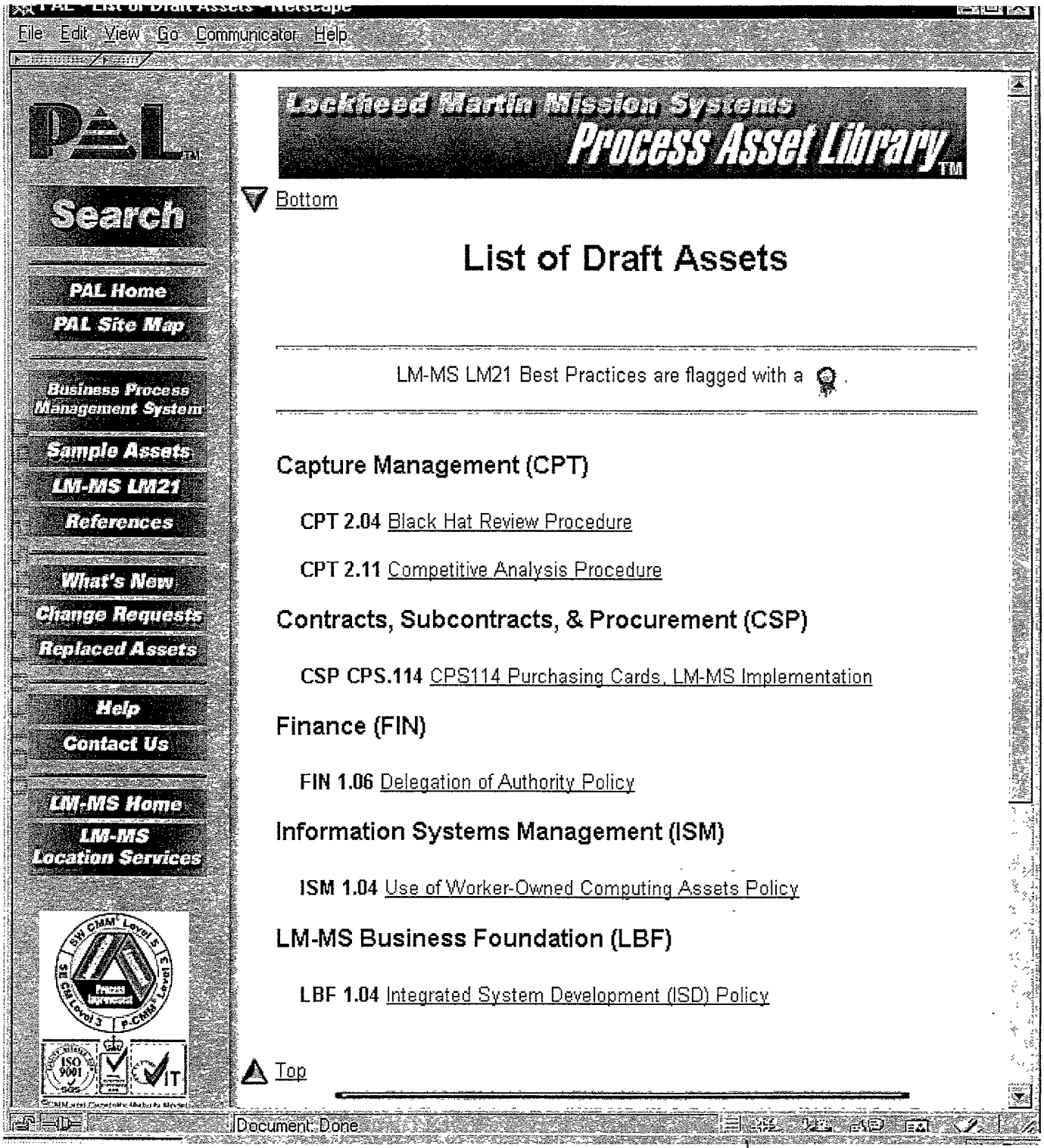
FIG. 11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Capture Management (CPT)
CPT 2.04 Black Hat Review Procedure
CPT 2.11 Competitive Analysis Procedure
Contracts, Subcontracts, & Procurement (CSP)
CSP CPS.114 CPS114 Purchasing Cards, LM-MS Implementation
Finance (FIN)
FIN 1.06 Delegation of Authority Policy
Information Systems Management (ISM)
ISM 1.04 Use of Worker-Owned Computing Assets Policy
LM-MS Business Foundation (LBF)
LBF 1.04 Integrated System Development (ISD) Policy
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Document: Done

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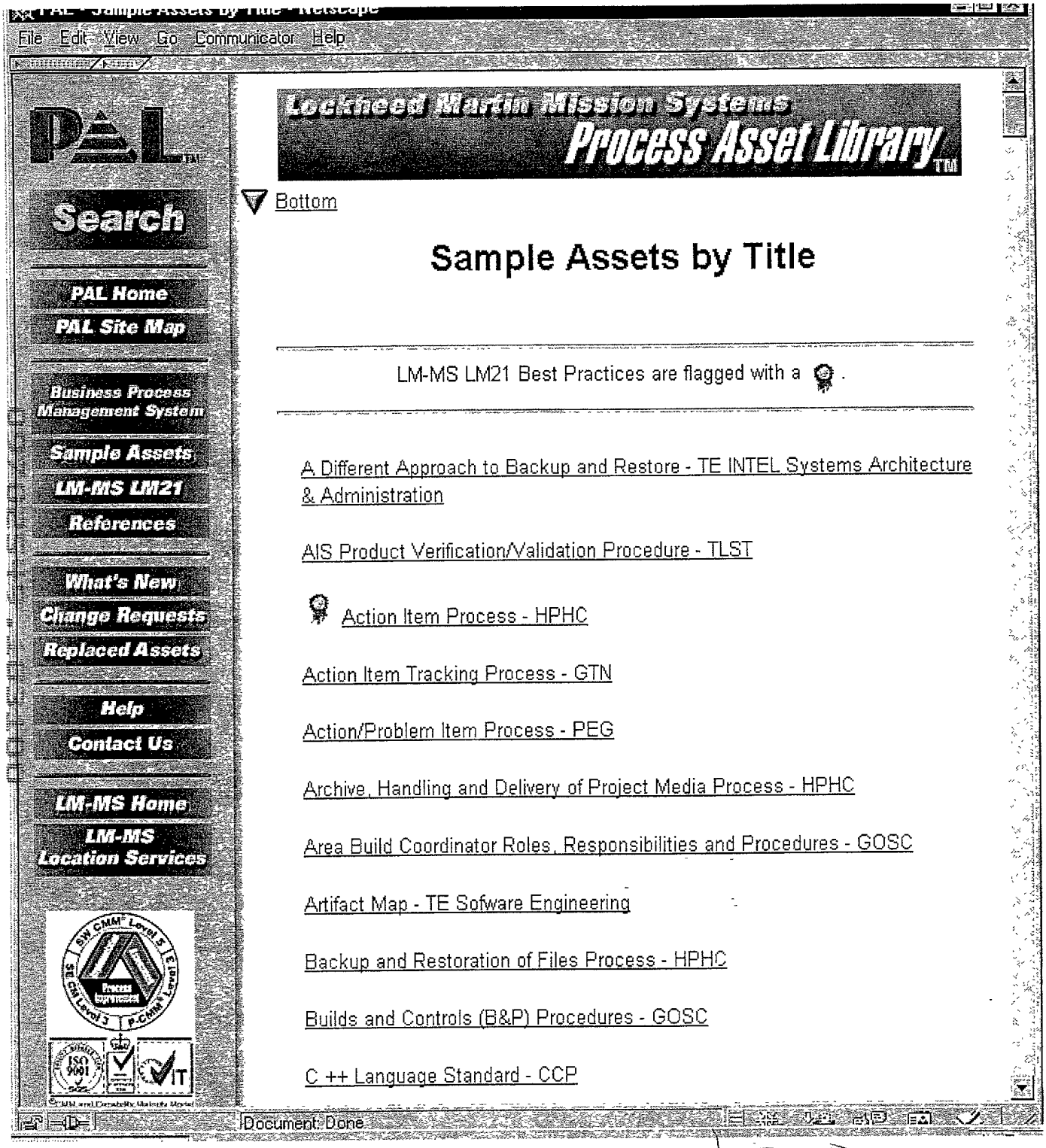
FIG. 12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LM-MS LM21 Best Practices are flagged with a .
A Different Approach to Backup and Restore - TE INTEL Systems Architecture & Administration
AIS Product Verification/Validation Procedure - TLST
Action Item Process - HPHC
Action Item Tracking Process - GTN
Action/Problem Item Process - PEG
Archive, Handling and Delivery of Project Media Process - HPHC
Area Build Coordinator Roles, Responsibilities and Procedures - GOSC
Artifact Map - TE Sofware Engineering
Backup and Restoration of Files Process - HPHC
Builds and Controls (B&P) Procedures - GOSC
C ++ Language Standard - CCP
Document: Done

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FIG. 13

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Introduction

Day 1 Startup

Program Manager's Roadmap for Process Startup to Maturity V1.0

Select on any button or bullet for more information

Roadmap is used to create Program Level Processes

(Tier 3 of LM MS Process Framework)

Develop Program Management Documentation

- Program Management Plan
- Risk Management Documentation
- Data Management Documentation
- Subcontract Management Documentation
- Training Program Documentation
- PCMS Implementation 2010

Develop Technical Management Documentation

- Requirements Management Documentation
- Configuration Management Documentation
- SSDP Tailoring Checklist

Develop Program Plan/Process Documentation

- Customer Interactions
- Internal Reviews
- Action Item Tracking
- Process Launch Materials
- Team Launch Materials

Months 1-3

- S/W Project Tracking Process
- Vendor Management Process
- Leadership Board Measurements
- Concept of Operations
- SE Management Plan
- Requirements Specification
- S/W Documentation
- Integration and Test Documentation
- S/W Quality Assurance Plan
- Measurements and Tracking Documentation

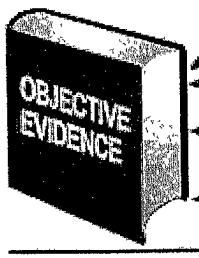
Months 1-6

- Integrated S/W Management Documentation
- S/W Product Engineering Documentation
- Reviews and Inspections Documentation
- Inter-group Coordination Process
- Lessons Learned Capture

By Month 9

- QPM/SQM Plan
- Defect Prevention
- Process Change Management (Process Improvement Plan)

By Month 12



Month 1 2 3 4 5 6 7 8 9 10 11 12

Initial | PCR | SW CMM Level 2 | PAR | SW CMM Level 3 | SW CMM Level 4/5

6001.C

FIG. 14 L220

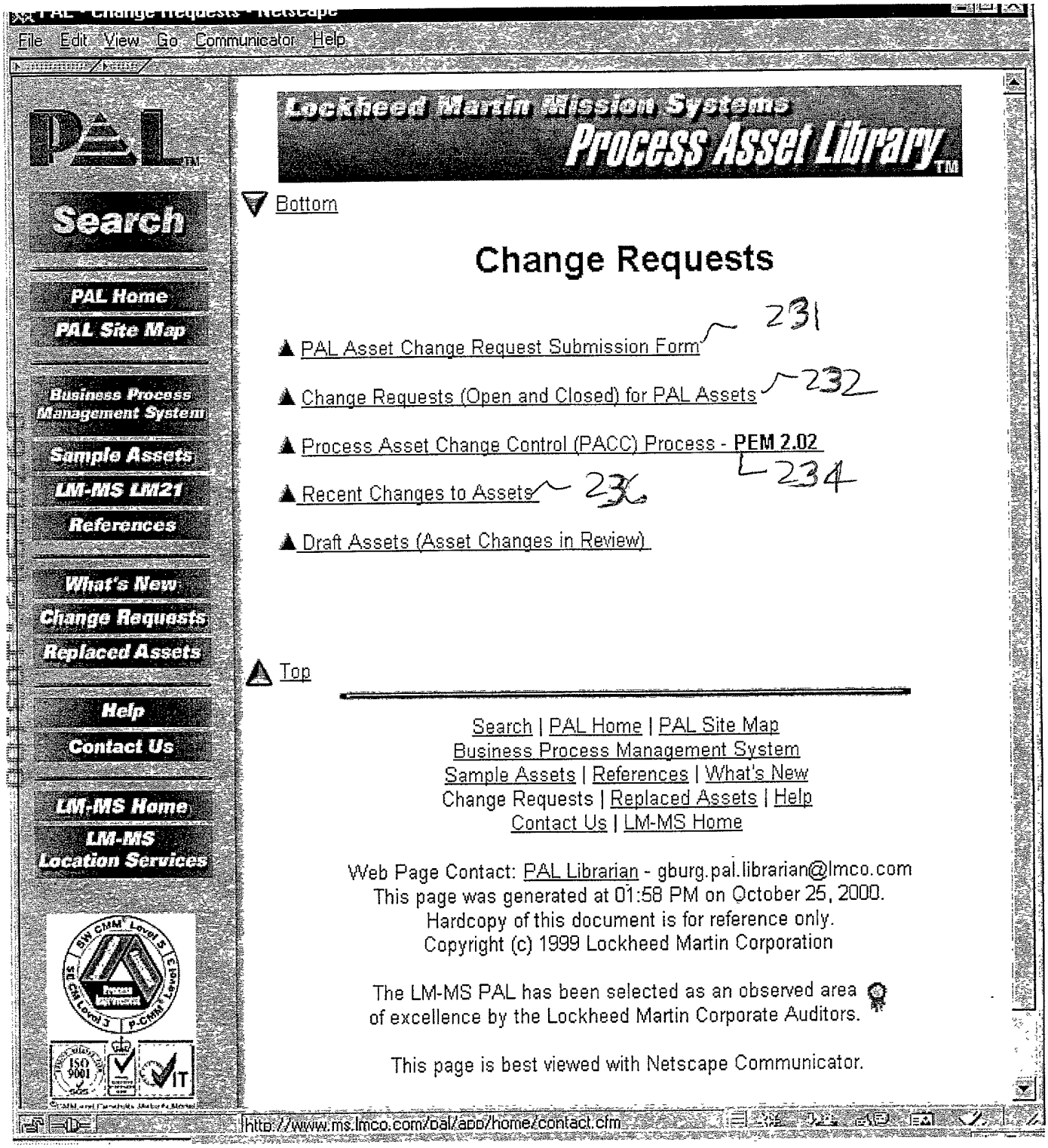

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FIG. 15

Docket No.
45118-00032

Declaration For Patent Application

English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

SYSTEM AND METHOD FOR THE STORAGE AND ACCESS OF ELECTRONIC DATA IN A WEB-BASED COMPUTER SYSTEM

the specification of which

(check one)

☒ is attached hereto.

☐ was filed on _____ as United States Application No. or PCT International Application Number _____

and was amended on _____

(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)			Priority Not Claimed
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	☐
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	☐
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	☐

I hereby claim the benefit under 35 U.S.C. Section 119(e) of any United States provisional application(s) listed below:

60/162,643	November 1, 1999
(Application Serial No.)	(Filing Date)
(Application Serial No.)	(Filing Date)
(Application Serial No.)	(Filing Date)

I hereby claim the benefit under 35 U. S. C. Section 120 of any United States application(s), or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, CFR Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

09/695,450

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Fifth inventor's signature Date
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Full name of seventh inventor, if any
Seventh inventor's signature Date
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Post Office Address

Full name of eighth inventor, if any
Eighth inventor's signature Date
Residence
Citizenship
Post Office Address